MAY 18, 1940

Railway Age

Founded in 1856

MAY 20 1940

Transportation Library

THE NAME
with a meaning . . .

Rail Anti-Creeper

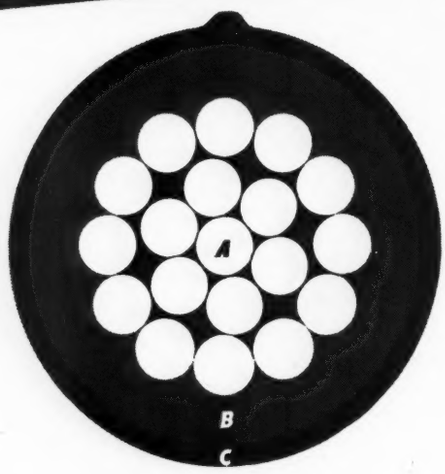
A device with a name that implies its purpose and does it so well it can have no substitutes

THE P. & M. CO.

CHICAGO • NEW YORK • MONTREAL • LONDON • PARIS • CALCUTTA • SYDNEY

TRANSPORTATION LIBRARY

SEALED INSULATION FROM TERMINAL TO TERMINAL



A

Conductor perfectly centered because insulation and sheath are applied by Okonite's strip-insulating process and vulcanized in a continuous metal mold.

B

Uniform wall of insulation as determined by service conditions (Okonite, Okolite or Okosheath, as required).

C

Protective bonded sheath of stable Okoprene—made of neoprene and containing no rubber—resists oil, chemicals, ozone, abrasion, sunlight and is non-inflammable.

In an Okoprene-sheathed cable, the rubber insulation is permanently sealed right up to the terminal. The vital insulation itself is never exposed to destructive action of air or light. There is no braid that must be cut back to prevent current leakage.

The Okoprene sheath (made of neoprene), is bonded to the insulation during the vulcanizing process and permanently protects it against attack by air, sunlight, ozone, oil or corrosive chemicals.

Okoprene sheaths are unaffected by the range of temperatures encountered under the most exposed conditions and will give long-lived protection to any type of Okonite insulation. Write today for Booklets OK-2009 and OK-2012, The Okonite Company, Passaic, N. J., offices in principal cities.

OKOPRENE – OKONITE

Sheathed Wires and Cables

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 108, No. 20.

RAILWAY AGE

The Blitzkrieg Against the Transportation Bill

The Transportation Bill (S. 2009) of 1940 apparently is dead—killed by a combination of Big Labor and Big Business—although efforts may be made to resuscitate it if Congress does not adjourn too soon. Big Labor in this case consisted of the five transportation brotherhoods. The bill was supported to the last by the heads of thirteen unions representing over 75 per cent of all railroad employees. The Big Business with which Big Labor combined consists of big corporations shipping largely by inland waterways principally at the expense of the taxpayers of the United States, and pocketing the difference between the costs by water that they actually incur and the railway rates that they include in their prices to their customers. That this part of Big Business did not represent business in general is indicated by the fact that on April 27 W. Gibson Carey, Jr., president of the Chamber of Commerce of the United States, issued a statement saying, "taken as a whole the bill represents another forward step in the accomplishment of a constructive program of transportation legislation."

A more incongruous and unholy alliance to defeat a piece of legislation was never made. It was formed suddenly after the conference committee of Congress had completely agreed upon the bill that it would report favorably to both houses; and no explanation of it has yet come from those who joined in it. The circumstances indicate it was effected as a result of the Big Business lobby opposing the bill indicating to the heads of the transportation brotherhoods that it will in future support the latter in promoting train limit, full crew and other bills expected to be before Congress at its next session.

Significant Preceding Developments

The developments preceding the defeat of this legislation will be retraced with great interest and mixed feelings by those really desiring to promote the interests of the railways, their employees and the public. In 1937 the railways agreed to advances in the wages of all their employees that raised them above the pre-depression level. In 1938, because of the severe "recession," they sought a general reduction of 15 per cent. No agreement being reached by negotiation, the controversy was referred to an "emergency board" appointed by President Roosevelt. It reported against the reduction, holding the railways had much more to gain by co-operating with their employees, especially in behalf of such legislation as was required to improve their competitive position.

Thereupon, President Roosevelt appointed the "Committee of Six" to draft a legislative program, saying that if they agreed upon such a program he would support it. The Committee of Six consisted of the late Carl R. Gray, chairman of the Union Pacific; M. W. Clement, president of the Pennsylvania; E. E. Norris, president of the Southern; George M. Harrison, president of the Railway Clerks' Union and then chairman of the Railway Labor Executives' Association; B. M. Jewell, president of the Railway Employees' Department of the American Federation of Labor, and David B. Robertson, president of the Brotherhood of Locomotive Enginemen and Firemen. They did agree upon a legislative program, and counsel for the railways and the labor unions joined in drafting a bill in accordance with it.

Labor Leaders—Excepting Whitney—Approve the Bill

Every provision of this bill was approved by the Railway Labor Executives Association by a formal vote after ample opportunity had been given to examine it. Its provisions included one to the effect that "the (Interstate Commerce) Commission shall require as a prerequisite to its approval of any proposed transaction under the provisions of this (consolidation) section a fair and equitable arrangement to protect the interests of the employees affected." It was opposed from its inception by A. F. Whitney, president of the Brotherhood of Railroad Trainmen, who was not a member of the Railway Labor Executives' Association, and who broadcast the plainly false charge that its consolidation provisions would throw 250 to 300 thousand railway employees out of work. Mr. Whitney joined with the opponents of waterway regulation in supporting the Harrington amendment to the House bill which provided that no consolidation should be approved by the Commission if it would "result in unemployment or displacement of employees . . . or in the impairment of existing rights of said employees." This provision

would have made any consolidation impossible, and that was the purpose of it.

Finally, Even Whitney Endorses It

Finally, when the bill was in conference, representatives of the railways and of all the labor unions agreed to recommend that all consolidation provisions be omitted from it, which was done. The "Washington agreement," made in May, 1936, by all the unions and the railways, provides that where employees lose their jobs as a result of consolidations or co-ordinations, they shall be compensated according to a schedule set forth in the agreement; and it was decided this would afford sufficient protection to employees without any changes being made in the consolidation provisions of the Transportation Act of 1920.

On April 29 Mr. Whitney addressed a telegram to Chairman Lea of the House Committee saying "now that conferees have eliminated that (consolidation) section the source of our opposition (to S. 2009) is eliminated." As already stated, David B. Robertson, president of the Brotherhood of Locomotive Firemen and Enginemen, was a member of the Committee of Six; and in the May issue of the magazine of this union there appeared an editorial saying, "With this last impediment to its enactment out of the way it should be only a short time now until that greatly needed and most desirable legislation is placed upon the statute books."

And Then the Blitzkrieg

Nevertheless, on May 1 Messrs. Whitney and Robertson joined with Alvanley Johnston, president of the Brotherhood of Locomotive Engineers, J. A. Phillips, president of the Order of Railway Conductors, and T. C. Cashen, president of the Switchmen's Union, in a letter to members of Congress stating that they were "disappointed to learn that the Conference Committee . . . has stricken out of the bill the consolidation section as amended by the House," demanding that the bill be "recommitted," and proposing an amendment providing that the "Commission shall require a fair and equitable arrangement to protect the interests of the railroad employees" as a prerequisite not only to its approval of any consolidation but of the *"substitution and use of other means of transportation for rail transportation proposed to be abandoned."*

This went much farther than any provision ever previously proposed, including even the Harrington amendment, which provided for "protection" of employees only in case of consolidations. As already indicated, the heads of thirteen other unions, including Messrs. Harrison and Jewell who had been members of the Committee of Six, immediately joined in a statement urging Congress to pass the bill, declaring the interest of employees "will be improved by the enactment of the conference report," and emphasizing that "unregulated, subsidized water and motor carrier transportation is taking a heavy toll of railroad employment and railroad business."

The mere recital of what the heads of the five transportation brotherhoods, and especially Mr. Robertson, a member of the Committee of Six, did seems a sufficient indication of whether they acted in good faith toward the railroads, toward the heads and members of unions representing 850,000 employees and toward Congress. Excepting for their last minute reversal of attitude the bill doubtless would have been passed, because it was sure of favorable action in the Senate and was "recommitted" by a majority of only 27 in the House.

A Year and a Half's Important Work Nullified

And thus was nullified a year and a half's hard work by numerous busy men both inside and outside of Congress to produce a piece of needed and constructive legislation. The bill as finally agreed upon would have been only a start in the right direction; but too much commendation cannot be given to members of Congress such as Chairman Wheeler of the Senate Committee on Interstate Commerce, Chairman Lea of the House Committee, Senator Reed of Kansas, Senator Truman of Missouri and other members of Congress who tried faithfully to make that start—or too much condemnation to pretended "friends of private enterprise," such as Representative Wadsworth (Rep.) of New York, who helped to defeat it in total disregard of their ostensible and often avowed principles.

How Increase Employment?

The correct explanation of why the heads of the transportation brotherhoods joined with the Big Business interests opposed to regulation of waterways in beating the bill seems easy enough. There are two schools of thought regarding the best means of increasing railway employment. One holds that the best way is to force the railways to employ more men by legislation and the use of the unions' economic strength. The other holds that the *only way* to do it is to increase railway traffic and gross earnings. The transportation brotherhoods especially heretofore have always relied principally or solely upon the former means, although the record proves these means never have increased total railway employment excepting temporarily. What their use has done at some times and places has been to force the railways unnecessarily to maintain or increase the number of employees in some branches of the service and thereby force them to curtail or reduce employment by a larger number in other branches of the service.

For all those who try to increase railway employment are confronted with an economic law, all efforts to long evade or override which have thus far proved unavailing. That law is, that, with passenger and

freight rates, especially the latter, at any given general level, the railways will and can pay to their employees *as a whole* only an almost absolutely fixed *percentage of their gross earnings.* The reason is afforded by the statistics given in Table I. They show that during the last fifteen years total wages have averaged 44.3 per cent of gross earnings; that in spite of all the unprecedented changes in total gross earnings, in wage scales and in employment that have occurred during this period that percentage has never been lower than 42.6 or as high as 47 per cent; and, that, fluctuating within these limits, it has always reverted to about 44 per cent. In 1934, when gross earnings were only 3 billion 300 million dollars, it was 44.1 per cent. In 1939, when gross earnings were almost 4 billion dollars and the average annual wage was 25 per cent higher than in 1934, it was 44.3 per cent—exactly the same as the average of the fifteen years.

Table I—Railway Gross Earnings for Fifteen Years and How They Were Used

		Cents per dollar of gross earnings				
Year	Gross Earnings	Labor	Fuel, materials & supplies & miscellaneous	All other operating expenses†	Taxes	Net railway operating income
1925...	$6,122,509,856	43.2	25.2	7.4	5.9	18.3
1926...	6,382,939,546	42.6	25.0	7.3	6.1	19.0
1927...	6,136,300,270	43.9	24.8	7.8	6.1	17.4
1928...	6,111,735,511	43.0	23.5	7.9	6.4	19.2
1929...	6,279,520,544	42.6	23.1	8.1	6.3	19.9
1930...	5,281,196,870	44.8	22.8	9.3	6.6	16.5
1931...	4,188,343,244	46.9	22.3	11.0	7.3	12.5
1932...	3,126,760,154	46.0	21.6	13.2	8.8	10.4
1933...	3,095,403,904	43.2	20.5	12.9	8.1	15.3
1934...	3,271,566,822	44.1	21.7	12.8	7.3	14.1
1935...	3,451,929,411	45.0	22.2	11.4	6.9	14.5
1936...	4,052,734,139	42.9	22.3	10.4	7.9	16.5
1937...	4,166,068,602	44.8	23.5	9.7	7.8	14.2
1938...	3,565,490,753	46.5	22.6	10.9	9.5	10.5
*1939...	3,995,070,943	44.3	22.4	9.7	8.9	14.7

* Partially estimated.
† Loss and damage, depreciation, insurance, pensions and equipment and joint facility net rentals.

Total Payroll Determined by Gross Earnings

This has been the case, as the statistics in the table show, because, in order to continue operating, the railways must in every year use about 40 per cent of their gross earnings in buying fuel, materials and supplies and in paying other operating expenses and taxes, and must have something left as net earnings for their security owners. Therefore, even an advance in wage rates will increase the total payroll *only if there occurs an increase in gross earnings,* and will increase the payroll no more in proportion than the increase in gross earnings. Gross earnings were almost ¾ of a billion dollars larger in 1939 than in 1934. The number of employees in 1934 was 1,007,002. At the average wage of 1934 the total payroll of 1939 would have employed 1,235,745 persons. But the advance of 25 per cent in average annual compensation between these years consumed more than the 44 per cent of this increase in gross earnings that could be added to the payroll. Therefore, although the total payroll increased, the number of employees in 1939 was 987,943—or 247,802 less than the number that the 1939 payroll would have employed at the 1934 average annual wage, and also about 20,000 less than in 1934. Because of the economic law limiting the total payroll to about 44 per cent of gross earnings the advances in wages made subsequent to 1934 simply deprived about a quarter of a million men of employment and the railroads of the useful and needed work that they would have done.

Classes in Which Unemployment Has Been Greatest

All the heads of the railway labor unions know these facts—or should know them, because they have heard them presented often enough. And all but one of them and the railway executives agreed upon the proposed transportation legislation, and agreed to support it, because they believed it would reduce the competitive handicaps to which the railways are subject and thereby make possible increases in the payroll and in total employment by the only means by which they ever have been caused excepting temporarily—i. e., an increase in railway gross earnings. Unquestionably the transportation brotherhoods, at the last minute and without warning, abandoned co-operation, not only with the railways, but with all the other railway unions, in support of this legislation and joined with Big Business interests heretofore considered enemies of all railways and railway employees in defeating it for the purpose of trying to secure advantages for themselves at the expense of everybody else.

For when total railway employment increases or decreases it does not increase or decrease equally in all branches of the service. Throughout the depression train service employees have suffered less from unemployment than those in other branches of the service. The number in train service declined from 327,556 in 1929 to 221,890 in 1939, or 32 per cent. The number of all other employees declined from 1,333,294 to 766,053, or 42 per cent—relatively 31 per cent more. The decline of 567,000 in classes of employees outside train service was 85 per cent of the total decline. Consequently, in these classes would occur a proportionately large part of any increase in total employment due to an increase in gross earnings—provided that this was not prevented by train crew and other legislation forcing abnormal and unnecessary increases of employment in train service.

The Real "Nigger in the Wood Pile"

And that uncovers the real Senegambian in the wood pile. The proposed legislation, if it had the intended effects, would have increased railway gross earnings and total employment. But the leaders of the transportation brotherhoods always previously had favored "make-work" legislation as a means of increasing employment for their crafts more than legislation tending to increase gross earnings. And at the last moment

they reverted to their old attitude and policy because they decided they had more to gain for themselves by trying to inject "make-work" legislation into the transportation bill, at the risk of defeating it, than by supporting it as it had been agreed upon—in view of the fact that probably 85 per cent of any increase in employment caused by an increase in gross earnings would occur in the classes of employees outside train service.

The waterway allies of Mr. Whitney outside and inside Congress no doubt encouraged them to adopt this view with whatever promises of future co-operation were required. And thus the transportation bill was slain in the house of some of its ostensible friends among railway labor leaders, while other railway labor leaders representing more than three-fourths of employees were urging its passage in the interest of this three-fourths of employees.

What is the moral? Perhaps it is to be found in the old saying, "Beware of Greeks who come bearing gifts." And what of the future? The effort to secure legislation required to equalize the competitive conditions under which the railways operate should be renewed with increased energy. It can be secured with the support of railway employees and business men who can see that their interest is the same as that of the railways. And after the experience of recent years, and especially this most recent experience, the railways in seeking such legislation in future apparently will have the advantage of knowing who are their reliable friends in labor unions, in business and in Congress.

Is the Forwarder the Answer?

Based upon freight forwarder evidence in Docket 27365, and current I. C. C. statistics, there seems to have been no appreciable change (except possibly some loss) in the volume of forwarder traffic handled by the railroads during the period 1936-1939. In the same period rail merchandise traffic decreased 9 per cent.

The railroads handled 15,000,000 tons of merchandise traffic in 1939 for an average revenue of $16.96 per ton and 2,800,000 tons of forwarder traffic for an average revenue of $16 per ton. If the forwarder had handled the remaining rail merchandise traffic at full rail rates, according to their average handling cost of $4.75 per ton developed in Docket 27365, they would have lost $56,800,000 on this traffic.

This calculation assumes the forwarders could handle this added traffic without increasing their present average cost. As a rule, forwarders and trucks are "working on the railroads" by soliciting only high-rated, volume traffic. This leaves the small-lot, low-rated traffic for the railroads. Because of this, if forwarders should take all traffic—and not just "picked-and-chosen" traffic—it follows that their unit costs would rise; consequently the estimate of $56,800,000 loss to forwarders if they took over all l. c. l. traffic is probably quite conservative.

The forwarders have so far been able to capture less than one-tenth of the available merchandise tonnage (with no improvement, apparently, in recent years) and have retained only about two-thirds of this on the railroads. The trucks have captured more than one-half of the available traffic.

The forwarder service has not relieved the railroads from the necessity of maintaining at least a skeleton merchandise service (they are required by law to maintain such service).

This has produced and kept the rail unit cost comparatively high and the spreading of the merchandise traffic thinly out over the l. c. l. rail, forwarder, and truck service, has served materially to increase unit cost by all forms of transportation. This depletion of railroad traffic and revenue has compelled this form of transportation to impair its service in thin areas to the extent that, at times, it tends to repel traffic rather than invite it.

It is doubtful whether it can be demonstrated that the forwarder method of handling merchandise traffic *alone,* could be depended upon to gather a fair share of traffic for the railroads. There is much to indicate that the more logical approach would be, first, to see what a revised rate structure will do to increase railroad traffic and eliminate present uneconomic facilities and services—forcing traffic into more economically sound channels. Thereafter, when it is known how much and what kind of traffic is destined to move by rail, it can be determined whether the forwarder method of dealing with it promises further economies.

Current estimates indicate that forwarders and trucks are receiving more than $1,500,000,000 gross revenue annually and that a voluntary rate readjustment involving not more than $100,000,000 of railroad revenue, if soundly conceived and applied only to higher-rated competitive traffic, would serve to deprive the forwarder and truck of net revenue on business *unsoundly* competitive with railroad service.

Such a reduction would not destroy the economic usefulness of the forwarder and the truck in their soundly economic spheres—because it is not contemplated that the railroads should try to compete with them where their services are genuinely more economical. Such adjustment would, however, encourage these competitors, in order to make a profit, to restrict their operations to those where they can show genuine economies, compared to the railroads. This would be a real move in the direction of genuine co-ordination. It would materially improve the economic position and reduce the unit cost of the remaining facilities which would be sufficiently adequate to serve the public efficiently.

The real problem is how we can best fit the functions now being performed by the forwarder into the transportation picture so that the forwarder will be an undoubted economic benefit and not a liability to the transportation industry. No method of transportation, however efficient, can constitute a final answer to the transportation problem so long as that method is used for traffic to which it is not economically best suited; or so long as that method fails to get traffic to which it has a better claim than any other agency.

How Can It Be Eliminated?*

Recent discoveries regarding the causes of this costly and troublesome phenomenon in locomotive boilers point the way to means of combating it

IT was recently estimated that intercrystalline corrosion in the rivet seams of locomotives costs the American railroads about $500,000 per year. This trouble, which formerly was more commonly designated by the term "embrittlement," has been encountered and definitely identified on a number of railroads, and it is probable that in at least a slight degree, and perhaps without being identified as intercrystalline corrosion, it has been noted on many lines.

Intensive investigation of the problem has been generously supported by the Association of American Railroads, as well as by several of the leading engineering organizations, private industries and the Bureau of Mines. This study has produced a coherent explanation of the processes and factors that allow such cracking to occur in a riveted seam. In addition, it has resulted in the development of devices which, when attached to a locomotive, will determine whether the water in the boiler will cause cracking, and of chemical methods of treating feedwater to make it safe for locomotive use. During the past year, the committee has continued in close contact with the research work on this problem that is being conducted by the Bureau of Mines.

How Embrittlement Occurs

For many years the mechanism that caused a solution to produce intercrystalline cracking, or embrittlement, was a profound mystery. All the details are still not known but an explanation can be offered that will fit the experimental facts now available. It is well known that under many conditions of service steel will corrode or rust; also that under more limited conditions this rusting will occur only at certain restricted points to produce deep holes or pits. Steel is made up of crystals held together by thin bands of material designated as grain boundaries. The chemical properties of these boundaries are known to be different from those of the crystals; therefore certain corroding solutions may exist that, instead of causing random distribution of holes or pits over the metal surface, will confine all the attack to the grain boundaries, separating the crystals from each other and eventually causing the metal to fail. As a crude illustration, the action might be likened to removal of the mortar from between the bricks in a wall.

It is unfortunate that the solutions that have been found most desirable in a boiler from the standpoint of preventing rusting and pitting of the tubes and the drum are those that are most prone to cause embrittlement in the riveted seams. In many cases, therefore, it is desirable to establish the necessary conditions to prevent pitting and then add chemicals to prevent embrittlement.

Metal Must Be Under Stress

Unlike rusting and pitting, embrittlement seems to occur only when the metal is under stress, particularly tension. Stresses in locomotive boilers are produced by the structural load, the steam pressure, or the cold working of the metal. Laboratory study indicates that the latter source of stresses is of the utmost importance. The cold bending of a sheet to form a locomotive drum will at times introduce enough stress to make embrittlement attack possible, while the cold distortion of the metal during the riveting of a seam may be even more productive of stresses.

To prevent embrittlement, excessive pressure and structural stresses in the seam should be avoided and all possible care should be exercised to the end that such stresses do not become localized, for a crack may be started from one point that will be difficult to stop. Above all else, however, the cold working of drum, butt, strap, and rivet metal should be held to a minimum. In other words, it is believed that the careful design and fabrication of locomotive boilers can prevent a large portion of the cracking, even though the water conditions may be bad.

Normal locomotive boiler water will not cause inter-

* This is abstracted from a report presented at the convention of the American Railway Engineering Association in March by a subcommittee of the Committee on Water Service, Fire Protection and Sanitation. R. E. Coughlan, engineer of tests of the Chicago & North Western, was chairman of the subcommittee.

crystalline cracking, but, when brought into contact with stressed metal, concentrated solutions of certain waters will cause embrittlement. If there is a slight leak through a seam, deposits of solids are frequently seen at the outer edge and, when the seam is torn apart, are found between the drum sheet and the butt straps as well as around the rivets. To create such deposits, which are made up of the so-called "soluble salts," the boiler water must concentrate several hundred fold, and it is concentrated solutions of this type that cause intercrystalline corrosion.

To produce such a concentrated solution, the leak must be very slow. One that can just be detected through the formation of a very faint haze of steam on a cold mirror held over the point of leakage is particularly dangerous. Such leaks are so small that they may not be detected during a cold pressure test on the locomotive. A boiler that shows deposits of white solids at the seam edges may be in serious danger of embrittlement.

In fabricating boiler drums, they should be made as tight as possible, for it is believed at the present time that intercrystalline cracking cannot occur in a locomotive boiler in the entire absence of leakage. The detector that has been developed for measuring the embrittling action of boiler water is a simple device for direct attachment to locomotives. The water circulates through a block, to which a specimen is clamped, and a slow leak creates a concentrated solution in contact with a stressed area of the specimen. If the water is embrittling, the specimen will crack. When this occurs, chemical treatment is added to the feedwater and the test is repeated to determine if the treatment has been effective in rendering the water non-embrittling. These devices are now in use on a number of railroads in this country.

Four Conditions Necessary

From the foregoing it is apparent that intercrystalline cracking cannot be attributed solely to either water conditions or to boiler construction, but to a combination of factors that simultaneously create the following conditions.

1. A boiler water which, when concentrated, will produce embrittlement or intercrystalline cracking.
2. High stress in the metal. This may result either from cold working or the application of external forces.
3. Formation of a film of the concentrated solution as a result of slow leakage.
4. Contact of the film of concentrated solution with the boiler metal in the region of high stress.

The first of these factors is in partial control of the chemist, the second probably depends on the design of the boiler and the character of the workmanship employed in its construction, the third depends on design and construction as well as conditions of service, while the last factor would seem to be pretty much in the hands of fate.

It should be possible to prevent embrittlement by eliminating any one of the four factors that have been listed. Water treatment would seem to be the simplest and least expensive remedy for application to locomotives that are already in service. Successful pursuance of this course in the past has been impossible because of incomplete and at times totally wrong information concerning embrittlement. Even at present, feedwater treating methods, while apparently successful, are still in the experimental stage. Fortunately it is now unnecessary to wait until a locomotive boiler cracks to determine if the treatment is ineffective, for a test run with the embrittlement detector will crack a specimen if the water is of the embrittling type and give warning of dangerous conditions in a short time.

Although embrittlement can be prevented by treating the water, this does not offer the slightest excuse for poor boiler design and bad workmanship. In every case of embrittlement cracking, the boiler manufacturer should be willing to assume and shoulder his full responsibility where poor design, bad shop practice or inferior workmanship is evident.

Use of Sodium Sulfate

As a result of a statistical study of stationary boilers, the conclusion was reached by a few engineers that the maintenance of certain amounts of sodium sulfate in a boiler water would prevent embrittlement. A subcommittee of the Boiler Code committee of the American Society of Mechanical Engineers later adopted this idea as the basis for the embrittlement code, in spite of the fact that the railroads had submitted statements indicating that their experience was apparently in disagreement with this belief.

In the past a tendency has existed to interpret evidence from stationary boilers largely with the idea that if a water were embrittling the boiler would crack. Therefore, if an alkaline boiler water contained sodium sulfate and the boiler did not crack, this was accepted as partial evidence that the sodium sulfate rendered the water non-embrittling. In view of the knowledge that is now available regarding the embrittling problem, the fallacy of such reasoning is readily apparent.

Even though a boiler water may be embrittling, the boiler will not crack unless simultaneously it develops that (1) leaks of just the right size allow the necessary concentration of the water to take place, (2) certain areas of the boiler metal are highly stressed, and (3) the stressed metal is in contact with the concentrated solution. Therefore, the absence of cracks in the boilers does not necessarily mean that sodium sulfate is protective, but may just as well mean that the boiler was well built, and cracking would not have occurred in the entire absence of sodium sulfate. Up to the present time even high concentrations of sodium sulfate have not prevented the cracking of detector specimens in laboratory or plant tests.

Thus far, the investigation at the Bureau of Mines has been confined largely to a study of chemical methods for treating the feedwater to prevent embrittlement. The theory that sodium sulfate is satisfactory for this purpose has not been substantiated by the laboratory work.

Extensive study has not revealed any inorganic compounds that will prevent embrittlement but which are definitely without undesirable properties. Therefore, a search for materials with these desirable properties has been made in the field of organic chemicals, with some degree of success.

Lignin Materials

In the pressure range normally used in locomotive operation, lignin-containing materials, as represented by sulfite liquor, will prevent cracking in detector specimens of boiler flange steel. Sulfite liquor is not expensive and its use on a considerable number of railroads has shown that it creates no operating difficulties. In several cases its effect on the embrittling action of the water is being closely followed by means of detectors attached to the locomotives. Practical tests of this type will furnish data of the utmost significance.

(*Continued on page 860*)

Vermont Compares RRs vs. Trucks

Railroads, truckers and shippers have "day in court" at first comprehensive state transport probe ever undertaken

VERMONT has undertaken the nation's first complete state legislative investigation of transportation since motor transport came of age. Confronted by the possible loss of the Rutland Railroad (operating 407 of the state's 896 mi. of railroad) and petitioned by the Vermont Railroad Association for a substantial permanent reduction of taxes, the state's bicameral legislature, in March, 1939, appointed a special Joint Transportation Commission to study the "various instrumentalities of transportation in this state" and render a report in 1941 recommending necessary changes in law and taxation, as was summarized in the *Railway Age* of May 4, page 788. The special investigating body consists of: Chairman: State Senator J. H. Macomber, Jr., Burlington, lawyer and former Rhodes scholar; M. C. Reynolds, newspaper publisher and member Public Service Commission; E. B. Cornwall, chairman P. S. C.; Senator L. S. Gay, woolen manufacturer; W. Darrow, farmer and member P. S. C.; and E. W. Gibson, Jr., secretary of Senate (admittedly counsel for various trucking interests). Hearings opened late in March in Montpelier, the state capital, and are continuing at intervals until the end of June.

Vermont, known widely for scenic beauty and "political independence," has a population of only 360,000, principally rural. Its agriculture is chiefly in dairy products and potatoes while the production of granite and marble and the manufacture of high-grade machinery and textiles form its major industries. A total of 14,000 mi. of highways wind and twist through its hilly terrain, of which 1,755 mi. form the state highway system. A large percentage of the roads are unimproved. Four per cent of the state-maintained mileage is less than 18 ft. wide and 59 per cent is between 18 and 19 ft. wide (the U. S. Bureau of Public Roads declares that "pavements of 20 ft. are reasonably adequate for light traffic used infrequently by wide trucks but inadequate for heavy mixed traffic.") The state's own Highway Department has reported to the American Association of State Highway Officials that over $40,000,000 is required to put the state's highways in proper condition for even immediate needs.

One of the special commission's biggest jobs is to determine whether additional regulation is required for motor carriers and, if so, recommend a framework for the legislature to consider. At present the P. S. C. regulates only common carriers operating on *fixed* routes, which rule leaves so many loopholes that only 38 trucks now come under state regulation. Even shipments of an interstate character often escape regulation entirely. Commissioner Cornwall pointed out that petroleum carriers loading from boats on Lake Champlain carry neither federal nor state permits, yet haul gasoline in interstate commerce. L. W. Horning, regional director of Competitive Transportation Research, A. A. R., stated for the record that the Vermont general commodity permit allows out-of-state "gypsy" truckers great freedom; many of them bring in coal and take out granite without fixed rates.

Hearings have developed that a number of important truck operators favor regulation of common and contract carriers along the lines of the Federal Motor Carrier Act. M. B. Emerson, president, Vermont Truck & Bus Association, favored state regulation patterned after the federal act, giving it as his opinion that it would be of aid to established operators. Several of the commissioners — especially Mr. Reynolds — expressed concern over the undue advantage which would accrue to private truck owners if the for-hire operators were so regulated and invited suggestions from shippers for possible regulation of the former. Mr. Gibson gave as his particular concern the fate of the "one-or-two-vehicle" operator under regulation. Commissioner Cornwall said the P. S. C. has proof that a number of common carriers in the state are not living up to filed tariffs.

Railroad Taxation a Primary Consideration

Since the primary purpose of the study is to find out how much the various carriers "put in the pot"—and how much they take out—the commission must make recommendations as to future railroad taxation. Following railroad appeal and the Poland state-wide railroad survey, the 1939 legislature *temporarily* cut appraisals of the Rutland 25 per cent and of the other roads, 20 per cent, and the tax rate from 1¼ per cent to 1 per cent. The railroads introduced a bill seeking to make these reductions permanent. In the course of the hearings, members of the commission have asked each shipper appearing to give his ideas on the subject; most of them said no taxes at all would be better than no railroad service.

The question of motor carrier subsidies has been the most controversial in the course of the hearings, but of almost equal weight has been the contention that Vermont's highways, which are characterized by steep grades and numerous sharp curves, are unfit at present to carry heavy or bulky trucks whether they pay their way or not. As pointed out during the hearings by Professor C. B. Breed, author of a Vermont road study, summarized in the *Railway Age* of May 4, page 788, the state's roads are of "light-type construction" and the recent increase in legal weight limit to 40,000 lb. is liable to cause heavy damage. Added to these factors, is the necessity for the state to hold and increase its substantial tourist trade. The commission asked a great many questions on the extent and effect thereon of week-end trucking and inquired of shipper and truck witnesses whether it ought to recommend laws to restrict commercial vehicles on week-ends and holidays for the benefit of pleasure cars. A number of private operators who use trucks entirely for wholesale and retail distribution said they didn't mind because they use the highways only on business days. Several common and contract carriers said they had to run trucks on Sundays for "emergency" shipments.

Expert witness for the highway interests was H. E. Stocker, assistant professor of transportation at New York University and traffic consultant for a number of trucking companies, whose career includes several years' employment with the Southern Pacific (his first job after

college) and executive positions with ocean shipping concerns. In lengthy direct testimony which took up all of May 10's session, Mr. Stocker sought to convince the commission that highway transportation was not only not subsidized but that it "over-paid" to the extent of $1,861,000 in 1938.

As for the Breed study (which showed a subsidy to motor vehicles in Vermont of $3,979,922 in 1938), and the Breed-Older-Downs national study, Mr. Stocker declared at the outset that in analyzing highway costs "common sense is better than mathematics and theories" and that "common sense is necessary to keep the experts from going haywire." Commissioner Reynolds asked: "Is this 'common sense' used in arriving at your mathematical conclusions?" "Yes," the witness replied. The latter then attacked the so-called public utility concept of highway costs and revenues (recognized by Messrs. Breed, Older and Downs in the A. A. R. study as well in independent studies by the states of Missouri and Illinois) on grounds of its complexity and theoretical status, quoting from a number of text-book definitions to the effect that a public utility is a private industry, not subject to competition, which requires regulation of abuses. Since highways are not private and cannot be charged with abuses they are not public utilities, Mr. Stocker claimed. Even a toll road, if owned by the state, cannot be considered a public utility. Furthermore, a New York University course defines a public utility as "an industry so designated by law"; but they, the courts, have never recognized highways as such. He concluded that the railroads seek to have highways classed as public utilities in order to destroy them.

Mr. Stocker assailed as well the use of interest on highway investment in the public utility concept, declaring that on the same grounds, a "fictitious" interest should be assumed on railroad investments. This latter would be impractical, since the rail carriers cannot earn a fair return without raising rates. If so, why then should interest be applied as a cost of highways? The witness implied that those advancing the interest theory are either dishonest or incompetent. At this point Mr. Horning interjected the reminder the Eastman "public aids" report does include interest. Mr. Stocker replied that Mr. Eastman is competent, but "he is in error in including interest because such a method is purely theoretical and not substantiated by authorities; I think the present method of simple arithmetic is working out satisfactorily without making complex mathematical calculations."

Most of the witness' testimony followed the arguments presented in "Is Motor Transportation subsidized?", which he wrote for and at the expense of the National Highway Users Conference in 1939 and which, he asserted, received favorable comments in the press except for a "name-calling editorial in a railroad organ." He analyzed service and cost advantages of trucks and busses —chiefly from his own experience—stressing flexibility; low fixed costs; economic advantage in public rather than private "capital" for rights-of-way; speed, etc. But throughout his testimony Mr. Stocker laid even greater stress on the "social benefits" of commercial highway transportation, pointing out that it gave a chance for the individual to go into business on his own "with little or no capital." He also pointed out that investment in trucks was mobile. For example, he said, before the federal Motor Carrier Act, if a truckman in Vermont heard from Cousin Louie in New Jersey that prospects were better down there, he could pick up and leave for greener fields.

The *chef d'ouvre* of Mr. Stocker's presentation was an exhibit showing taxes purported to be paid by motor transportation in 1938 and highway costs for Vermont allocated according to the percentages used by Mr. Eastman in his tentative report on highway financing (October, 1934). In this the witness showed an over-payment by highway users of $1,861,000 for the year. Included under "income from taxes on motor transportation" he included taxes on (1) garages (private and commercial storage); (2) auto salesrooms; (3) auto accessory shops; (4) automotive repair and service shops; (5) service stations; and (6) wholesalers. These payments were applied to highway users' payments toward the costs of the state's highways. [On this theory, taxes paid by the locomotive and car builders should be included in railroad taxes.—Ed.]

The witness concluded with the thought that the motor vehicles were paying taxes up to the limit of their ability and that if the findings of the Breed report were used as a basis for increased levies, the industry would be destroyed. As a parting shot for the railroads he said, "If any part of an industry becomes economically obsolete, it should be sloughed off."

Shippers Tell of Railroads' Importance

The commission set May 9 as a day for shippers to air their views. N. F. Patten, director, Bureau of Information, Anthracite Institute (which represents 70 per cent of production in the field) told the body, "It is our firm belief that, apart from a fringe of local sales area about 5 to 7 mi. from the mines, the anthracite industry is unalterably opposed to the long-distance truck haulage of anthracite." He pointed out that because facilities at the breakers were designed for loading into cars, the loading of trucks is expensive and many mines must make a special charge for so doing. He also outlined the advantages of encouraging local, track-side dealers who carry full stocks of the various grades, extend credit; pay taxes and give satisfactory all-year service. It was his belief that the consumers of coal trucked mine-to-door "are almost invariably short-weighted"—sometimes as high as 60 per cent. A wholesale and retail coal dealer of Burlington declared that he was totally dependent on the railroads and that the 126 retail dealers in the state received almost entirely all-rail from the mines. It was his thought that if "we can't support the railroads through operating revenues, we will have to through subsidies paid from taxes."

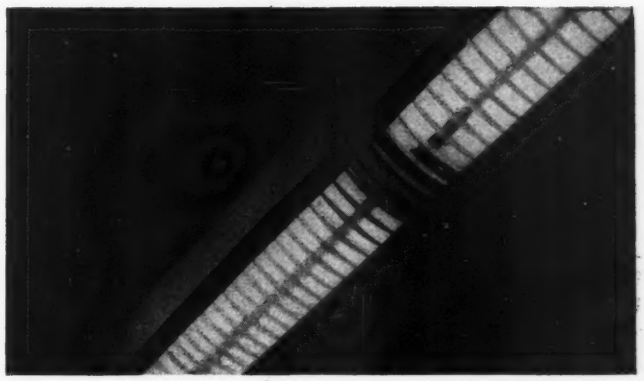
Carl Olimney, manager of the Associated Industries of Vermont, admitted that he had no remedy to suggest for the chaotic state of transportation but said he believed that competition had reached a point where it is destructive. He did want to see the "principle of private enterprise" preserved in transportation. P. C. Kittredge, representing the machine tool industries of Springfield, said both railroads and trucks are desirable but that railroads are "indispensable" for the outward movement of "precision tools" because they handle them with less damage. A Windsor manufacturer of large machines ranging from six to 20 tons in weight, said he ships practically 100 per cent by rail, with the exception of "farmed-out" piece-work to other plants for partial manufacture, because rail "is the only safe way" to ship heavy consignments. He has found railroad service up to date and would find it difficult to exist without it. A manufacturer of hand tools declared that his plant would close up if the railroads ceased operations.

E. W. Smith, a lumber dealer in Rutland, sent a telegram to the commission pointing out that "once the railroads are gone we can never be certain of present transportation rates by trucks as public can have no hold on

(*Continued on page 866*)

Pullman Lounge-Bedroom Cars

Plastic lens-controlled fluorescent lighting features cars in New York Central service



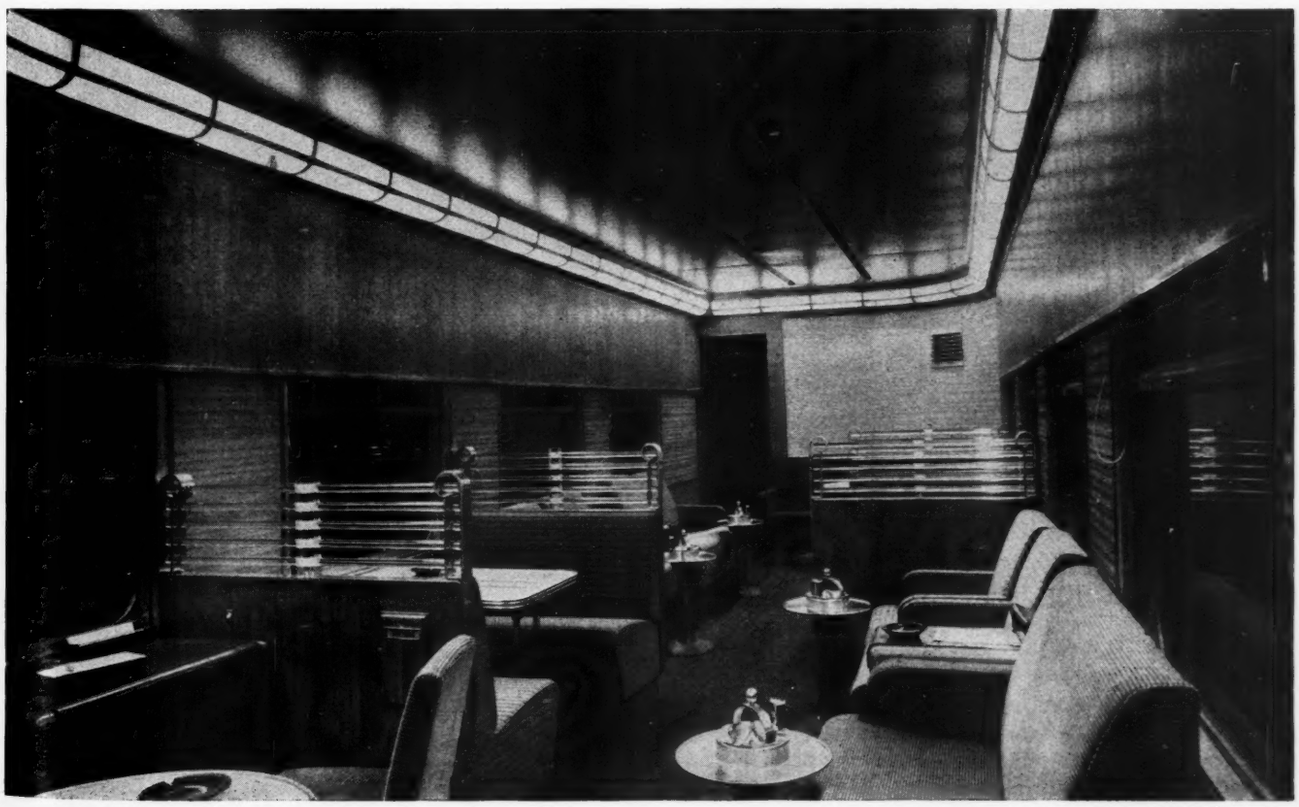
THERE were recently assigned for service on the New York Central six Pullman cars, known as the "Falls Series". Four of these are used on the Commodore Vanderbilt and two are in Detroiter service. A half of each car is given over to six bedrooms and a buffet, while the other half is a lounge section.

Deep tones predominate with lighter tones employed for relief in the wall decorations and upholstery of the lounge. The ceiling of the car is flat and is finished in a deep old ivory tone. The ends and pilasters are finished in a horizontal self-striped material with a greenish golden cast, while above the windows the finish is a light tone Flexwood. The wainscot surface is cork. The carpet is a mottle of green and black. The Venetian blinds are finished in mahogany.

The arrangement of the furniture is shown in the photographs. The curved end lounges are upholstered in Burgundy. The side lounges are a harmonizing red of a much lighter tone. One of the side chairs and the desk chairs are covered in a still lighter tone. The remainder of the side chairs are in beige. The card sections are upholstered in a light tone of soft green. The table tops are of deep ivory with light brown and green stripes. The ornamentation above the backs of the card sections are Lucite rods in satin-finished metal supports.

The lounge section is lighted by a continuous line of fluorescent fixtures, which extend completely around the edge of the ceiling, being curved where necessary to conform with the lines of the room. Each 1½x18-in., 15-watt lamp is enclosed in a fixture unit. The upper panel of the fixture is a cream-colored diffusing plastic which serves to distribute a warm diffused light to the ceiling area. Back of each lamp is a curved Alzak aluminum reflector. The lower panel of the fixture is in effect a cylindrical lens of transparent Lucite. It is made in sections about ¾-in. wide. The sections are stacked together

ABOVE—Closeup of Lighting Units Showing Diffusing Plastic Panels Above and Sectionalized Cylindrical Lucite Lenses Below—BOTTOM —Lounge Section of One of the Falls Series Bedroom-Lounge Cars (Photograph Made By Means of Regular Lighting Only)



like a loaf of sliced bread, and since the edges are not polished they act as louvers to shield the observer near the end of the car from direct view of the lighting units. The fixtures were designed by Luminator, Inc.

The room is 29 ft.-3½ in. long and 9 ft.-6 in. wide, and there is a total of 44 lamps in the lounge section and the lighting intensity on the 33-in. 45-deg. reading plane is 20 foot candles. With every other lamp in operation, the lighting intensity is 10 foot-candles, and in either case the lighting is well distributed over the reading plane. The total power input to the fluorescent lamps, with all lamps in service, is 660 watts. Including the auxiliaries, it is about 880 watts. There is an additional fluorescent lamp in the passageway, just outside each entrance to the lounge section. The remainder of the passageway, the vestibules and the bedrooms are lighted by incandescent fixtures.

How Power for Lighting is Supplied

Power for the fluorescent lights is obtained from the axle generator and storage battery through General Electric vibrating-switch inverters. A motor-generator set or "Genemotor" made by the Pioneer Electric Company, can be used to supply half of the fluorescent lights with the necessary 115-volt, 60-cycle power. The lamps are arranged on four circuits and each one is fed on the control board through flexible cables. On the ends of these cables are polarized plugs, which are normally fitted into four receptacles, supplied with power from the vibrating inverters. There are also two receptacles supplied by the Genemotor, and if necessary, two of the cables can be connected to these receptacles. The insertion of a plug automatically starts the Genemotor.

The single fluorescent lamps in the passageways may be connected to either of two fluorescent lamp circuits by a double-throw toggle switch. Their operation is thereby assured, regardless of which circuit is in use.

Electric power is supplied by a 12-kw. generator, driven from the axle by a Pullman wormgear drive. The batteries consist of two 25-cell parallel-connected sets of Edison type G22H batteries, having a combined rating of 1,240 amp. hr.

The car is air conditioned by the Pullman system. The compressor is driven from the car axle through a speed reducer. A new system of control is incorporated on the control panel. The hold-over feature insures that cooling is continuous when the car is standing at a station.

Each car is equipped with a Setchell-Carlson radio receiver, located in the end of the car opposite the air conditioning and lighting control panels. There are two loud speakers, one at each end of the lounge section. Either speaker may be used separately, or the two may be used together. The set has a special volume control feature, which permits adjustment of the volume before the audio-circuits to the speakers are closed. This is accomplished by means of a small speaker on the radio control panel. Antennae on the car roof consists of Neon cable in Micarta tubing, mounted on wood block insulators. The circuits in the power control panel are equipped with condensers to suppress radio interference.

THE OLD BAY LINE will celebrate the 100th anniversary of its inauguration on May 23. On that date, in 1840, the first steamer of the line made its maiden voyage between Baltimore, Md., and Norfolk, Va. The Baltimore Steam Packet Company, familiarly called the "Old Bay Line," is a subsidiary of the Seaboard Air Line and was established to connect with the Portsmouth & Weldon Railroad out of Norfolk, a predecessor road of the Seaboard.

Intercrystalline Corrosion—How Can It Be Eliminated?

(*Continued from page 856*)

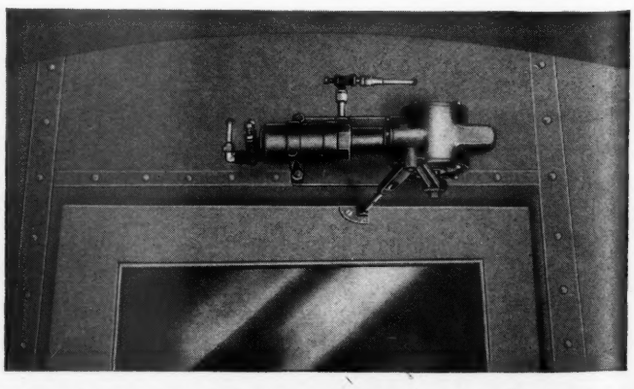
During the period from 1912 to 1926, one American railroad reported that 221 locomotives cracked through embrittlement. In the latter year lignin compounds were introduced into the feedwater in conjunction with an anti-foam treatment. A decrease in cracking was noted and the treatment has been in continuous use since that time. From 1926 to 1938, only eight cases involving the formation of cracks in engines due to embrittlement were reported on this road. At the present time the road is entirely free from this difficulty, and, in view of the fact that laboratory tests show the lignin to be a good protective agent, it may be reasonable to assign the major portion of the improvement to the use of this compound.

Statistical evidence of this type may or may not be cited, since it is obvious that over a period of years many changes might have been made, aside from those in water conditioning. Cases of this nature could be made a good deal more informative by the use of the embrittlement detector to determine the action of the waters before and after being treated with lignin. It is hoped that the detector tests now under way on other railroads will demonstrate less equivocally the action of the lignin compounds.

Quebracho, another organic compound, has been found suitable in the laboratory for preventing intercrystalline cracking over the pressure range from 200 lb. to above 500 lb. It is effective not only in boiler flange steel but also in specimens that have been cold worked before insertion in the detector. In general, it is probably too expensive for use in locomotives but it has been extensively applied in stationary boilers. Coupled with a powerful effect in preventing embrittlement, it will also remove oxygen from the boiler water and apparently exerts a marked dispersing action on solid particles in the water.

In the past, one of the foremost objections to the use of organic materials has been the lack of a chemical test for determining the concentration. This has been overcome by the development of a fairly rapid colorimetric method that may be used to estimate the concentration of lignin-containing materials, such as waste sulfite liquor and quebracho, and several other similar compounds. This method has been of considerable value in furthering the intelligent application of organic treatment for preventing embrittlement.

* * *



This Illustration Was Printed Upside Down on Page 822 of the May 11 Issue of the *Railway Age*—It Shows the National Pneumatic Company's Semi-Automatic End-Door Operator

Advancements in the Braking of High-Speed Trains*

A discussion of the six elements essential to the control of train speed and improvements in adhesion control

By Carl D. Stewart

Chief Engineer, Westinghouse Air Brake Company

WE are now surely living in an age of speed and more speed. People are patronizing those facilities that move them more quickly from place to place than they were able to go heretofore. Supplying these demands for higher speed carries with it the obligation to supply a corresponding improvement in the means for safely controlling these speeds. Particularly is this true in modern railroad practice with the advent of the streamline trains and the step-up in train speeds. All of these have moved up into the speed zone that requires more modern and effective control. It is appropriate, therefore, to talk about a most recent advancement in the art of brake control which has for its objective shorter stopping distances and freedom from slid wheels under the condition of variable rail adhesion.

When the first streamline train was being planned, we anticipated an increased demand on the brake system and immediately initiated an intensive research program to determine how best this new demand could be met. Heretofore it has been customary, when contemplating improved brake performance, to concentrate on improving the pneumatic devices. Continued gains in this direction are, however, increasingly difficult to realize and, furthermore, the brake performance for streamline trains is so exacting that all the elements, which in any way may be associated with the over-all retardation problem, must be improved.

Elements of the Braking Organization

In addition to the triple valve, there are five other elements involved in train retardation. These, in the sequence of their functioning are: (1) The means for transmitting the desired brake action from the engineer's brake valve on the locomotive to the last car in the train; (2) the triple valve which controls the flow of air to and from the brake cylinder; (3) the brake rigging which transmits the force from the brake cylinder, source of power, to the brake shoes; (4) the brake shoes; (5) the wheels and (6) the rails. This group of elements we refer to as the braking organization. Some of these we will discuss briefly, and others at length.

The transmitting element which heretofore has been pneumatic has been incorporated in the triple valve mechanism. The pneumatic transmitting element is by its nature definitely limited in its speed of functioning, and that limit has been very closely approached with modern pneumatic devices. Electric action, on the other hand, being substantially instantaneous, offers attractive possibilities for removing this limitation.

By substituting electric transmission for the pneumatic, we effect an appreciable saving in the time from brake-valve movement to brake action throughout the train. The tangible results of this substitution is a material saving in stopping distance. For illustration, assuming a modern 18-vehicle train, including the motive power, the time of pneumatic transmission from the locomotive to the last car is approximately four and one-half seconds, compared with virtually zero time for the same action transmitted electrically. At 100 m. p. h. the train moves 146 feet per second, so that the resultant saving in stopping distance is obvious.

Another very tangible improvement is gained by the greater flexibility of electric transmission, because much of the saving in time between terminals is not necessarily the result of higher maximum speeds, but rather of higher average speeds. The maximum speed may actually be reduced somewhat, for running speed may be sustained closer to curves, slow boards, etc., because trains may be slowed down quicker, and speed resumed more quickly on passing out of the restrictive zone.

The second element in our series is the triple valve itself. It is moved to its several operating positions by the transmitting element, and its primary function is to control the flow of air under pressure to and from the brake cylinder. The improvement we have developed in its functioning results from adding a new part to augment the functions of its predecessor so as automatically to regulate the braking force in proportion to speed. This additional device makes practical the employment of a very much greater braking force in the high-speed zone than has heretofore been possible. The augmented braking force in the high-speed zone is exceedingly beneficial because brake-shoe friction reduces, and distance traveled per second increases rapidly with increased train speed. In the past, the maximum brake-shoe force against the wheel has been 150 per cent of the weight of the car on the wheel. This is usually referred to as the braking ratio. This limitation in maximum braking force was established because experience taught us that intolerable wheel slippage results from the use of higher braking force, particularly in the lower speed zones. Through the addition of automatic means to regulate the force in proportion to speed, the use of greater braking force is now practical.

The third element in our brake organization is the brake rigging, and higher efficiency in force transmission has been secured through the reduction in the weight and number of parts incident to mounting the brake cylinder on the trucks instead of on the car body. More prompt and sensitive response is secured through this change. A further and more important advantage is that it makes possible the new form of brake-shoe force regulation which previously has been impractical. This distinct new

* Abstract of an address before the New York Railroad Club at the Engineering Societies Building, April 18, 1940.

advantage will be discussed in detail under another heading.

The next element of the six enumerated is the brake shoe. We are, of course, familiar with the type employed almost universally today, but recently other types have been developed that are being studied in the laboratory and in actual road service. This is such an important element in our series, that it deserves discussion by one better qualified than I.*

Another element which is often not given the attention that it deserves in braking considerations is the wheel. With the present standard brake shoe, the wheel does double duty in that it is the medium for carrying the braking force through to the rail, as well as being the complementary friction element with the brake shoe. Some of the new forms of brake shoes are associated with friction elements separated from the wheel, though usually closely associated with it. The braking portion of the wheel's work is thus taken over by the new friction element.

The sixth and last element essential to the control of the train speed is the rail. There are times when the rail surface does not afford the degree of adhesion that is desirable for retarding purposes, a fact that has had a profound influence on brake design and practice. The manner in which we solved this vexing problem is a very important phase of the over-all retardation study and it will, therefore, be worth while discussing two of the new developments in detail.

New Developments for Improving Brake Performance

As we have stated, the maximum braking ratio of 150 per cent, common for many years, was established by extended tests and every-day operating experience as that force which could be used safely most of the time and over the majority of the Class I railways, with little or no wheel damage. This percentage of braking force calls for a rail adhesion factor that is available except under very unusual rail conditions. By setting this relatively low limit, wheel sliding was comparatively rare, but stopping distance was not the minimum desired, particularly for high-speed operation. The operation of passenger trains with relatively low braking force has proven very satisfactory for many years because the sustained speeds have been low, but with the introduction of high-speed trains it became desirable to increase the effectiveness of the brake by using higher adhesion values and improvements in adhesion control.

Through the use of the new device that regulates the brake-cylinder pressure in proportion to the speed and the one that counteracts the ill effects of low adhesion, it is entirely practical to increase this braking ratio to 250 per cent maximum. By experience we find that this maximum value may be employed from top speed, for the particular train, down to approximately 65 m. p. h. Through this speed range the coefficient of friction between the cast-iron brake shoe and the wheel tread slowly approaches the maximum value that is considered desirable from the standpoint of a practical retardation rate, as well as rail adhesion.

When the speed reduces to this value, the brake-cylinder pressure-regulating device is then automatically set in operation to lower the brake-cylinder pressure some predetermined amount. The rate of this pressure reduction is controlled by a suitable orifice so that the force of the shoe against the wheel or other braking surfaces, if employed, tends to counteract the natural increase in brake-shoe friction. The first brake-cylinder pressure adjustment is completed about the time a second pressure reduction is initiated and at a train speed of approximately 40 m. p. h. The third and last reduction begins when the train speed is approximately 20 m. p. h. and the ultimate brake cylinder pressure resulting from this adjustment is retained to the stop. The nominal braking ratio for these four speed zones are 250, 200, 150 and 100 per cent. This particular plan of pressure control results in a surprisingly uniform retardation which is, however, of sufficient increased value that from high speed the stops are materially improved and yet discomfort to passengers and sliding of the wheels are avoided near the stop.

This plan provides an automatic regulation for brake-cylinder pressure that maintains a substantially uniform brake-shoe friction throughout the stop and this friction value is lower than the normal rail adhesion. It follows, therefore, that cases of slipping wheels will be limited to the occasional instances when rail adhesion is subnormal, such as is occasioned when water is dropped on the track from the train, or because of oily spots as is frequently encountered at highway crossings.

Two entirely different approaches to the spotty adhesion problem are available and intensive studies of both are being pursued. One approach is to provide means for increasing the rail adhesion when necessary, and the other is to provide means for offsetting the detrimental results of subnormal adhesion. Obviously the first deals with the cause, the second with the effect. While it is usually preferable to deal with the cause of an undesirable phenomenon, there are times when circumstances make it more practical to do the opposite, and still other times when it may be desirable to do both. The use of sand, when properly distributed on the rails, increases the adhesion between the wheel and the rail by a substantial amount, and the present research is primarily concerned with improved means for accomplishing reliable sand distribution.

The problems are, however, not simple ones. To name just a few, the higher the train speed, the greater the air turbulence around the wheels and the more difficult it is to get sand under the wheels. Also, low-adhesion spots, on an otherwise good rail, require that for full protection this situation must always be anticipated and sand used each time the brakes are applied with a relatively heavy pressure. It has been found that head end sanding only is entirely inadequate and that the nearer we approach to the use of sanding stations on each car truck, the nearer we approach dependable adhesion values. This naturally requires large quantities of sand as well as of air at sufficient pressure to counteract the action of high wind velocities. Then there is the problem of storing this sand on the train and of keeping it in suitable condition. In spite of these difficulties we feel certain that greatly improved rail adhesion is attainable and may not be too far from realization.

In the meantime we have perfected a relatively simple device for dealing with the effects of spotty low adhesion from which large potential benefits are possible in the form of materially shorter stops and reduced costs incident to slid wheels. This device, termed a Decelostat, momentarily reduces the brake pressure on the wheel that starts to slip and thereby enables it to return to train speed.

In fact, we have taken graphic records of wheel retardation in actual road operation and have been fortunate enough to record graphically incipient wheel sliding, and in some cases the reaction of the wheel slip controller was so prompt that it required careful analysis of the records to locate the change in the pattern pro-

* Maurice N. Trainer, president, Brake Shoe and Castings Division, American Brake Shoe and Foundry Company, presented a paper tracing the history and development of brake shoes.

duced by the wheel first slowing down and then resuming train speed.

It may be asked if this anti-wheel-slip device will lengthen the stopping distance if it functions as a result of a wheel slipping, and particularly at high speeds. The answer is that it does not, as has been demonstrated by actual road tests. As a matter of fact, the stopping distance is shortened because a sliding wheel is not as effective in stopping a vehicle as one braked just under the point of wheel sliding. The ability to materially increase the braking effort in the manner in which we have described makes possible consistent maximum brake performance under all kinds of adverse conditions, equivalent to the best performance that otherwise is only possible under the most favorable rail conditions.

The Speed-Pressure Regulator

As the coefficient of friction between the metal shoe and the car wheel or brake disc, if employed, increases with the reduction in speed, it follows that ideally the brake-cylinder pressure should be regulated continuously downward to counteract this phenomenon. Actually it is not necessary to have the regulating device perform so precisely. From road tests, it has been found that it is sufficient to regulate the pressure from the maximum to the minimum in four steps and that a very close approximation to the ideal is secured thereby.

The means by which this desirable function is accomplished consists of a current generating device that registers train speed through the medium of voltage change and electric relays that are tuned to react to the prevailing voltage at predetermined speeds and thereby bring about the desired regulation of brake-cylinder pressure. The brake-cylinder pressure regulating device, termed a differential relay, is electro-pneumatic in form and it is caused to function by the electric relays and regulates the brake-cylinder pressure in accordance with a predetermined plan. This plan, of course, is flexible and several combinations are in use today but the one most generally employed will be described here as representative of them all.

We have said that the maximum braking ratio with speed-pressure control is raised from the conventional 150 per cent to 250 per cent of the car weight. This braking ratio prevails from top speed for the train down to 65 m. p. h. At approximately 65 m. p. h. the first speed-sensitive detector relay functions and the electro-pneumatic relay initiates a reduction in brake-cylinder pressure. If the stop is being made at the maximum contemplated rate, such as prevails with an emergency application, the first brake-cylinder pressure reduction is completed about the time the train speed is reduced to 40 m. p. h. At this point the second speed-sensitive relay functions and the differential relay now initiates the second brake-cylinder pressure reduction. The braking ratio during this time has been reduced to 150 per cent. At 20 m. p. h. the third and last speed-sensitive relay functions and the differential relay initiates the third brake-cylinder pressure reduction. The braking ratio is thereby reduced to 100 per cent and this value prevails to the stop.

By the same means the brake-cylinder pressure for stops from intermediate speeds is limited to the value that is suitable for the particular speed at which the application is initiated. One striking example of the advantage of this plan of brake-cylinder pressure regulation is on the occasion of an emergency brake application by the conductor's valve at low speed, such as when starting out of a station.

There are two plans for applying speed-pressure control, both of which are in use today. For trains which remain permanently coupled, two centralized speed control units regulate the entire train. For trains that may have their consist altered, individual speed control units are applied to each car. With the first plan, control wires are run from the centralized units throughout the train, and with the second plan, each car is a self-contained unit in itself. The second plan is obviously more flexible and the full benefit of the modern and powerful brake is always available in trains of any consist. Large returns are immediately available from each modern brake equipment that is added to existing trains in that the stopping distance is shortened in direct proportion to the increase in the number of such installations in any train.

For wheel-slip protection the speed-control generator is used also for the protection of its particular axle and the same type of electric generator is added to each of the other axles of the train. Two of the electric relays used for speed governor control are likewise given a dual function to perform, and other electric relays of similar appearance and size, but different in function, are added to the relay panel. As you will recall, we stated that the electric relays used for speed-pressure control are constructed so as to be responsive to a certain *speed*, having in mind that speed and voltage values are synonymous. The electric relays used for wheel-slip protection on the other hand are so constructed as to be responsive to a certain rate of *change in speed*. There is no difficulty whatever in having these relays designed to ignore the rates of change in speed that are incident to normal stopping of the train and yet infallibly recognize rates of change in speed incident to a wheel commencing to slip. For example, the normal retardation rate of a train is about two and one-half miles per hour per second, and it may reach under unusual conditions five or perhaps five and one-half miles per hour per second.

On the other hand, a wheel slipping to a stop may reach a rate of deceleration of 100 miles per hour per second. The latitude this situation affords is so broad that we are free to select almost any rate we care to employ with our wheel-slip control relay. We have chosen the rate of 10 miles per hour per second, first, because it provides sufficient margin above the maximum train retardation rate to insure against unintentional functioning, and yet incipient wheel sliding is detected early enough to make possible the lowering of brake-cylinder pressure in time to avoid the wheel coming to a complete slide.

The device for preventing wheel slip, the Decelostat, is mounted on the journal-box cover. The same generator is used for all types of journals, but the mounting ring and drive details are altered to suit the particular type of journal box, whether it is a roller- or sleeve-bearing design. The generator develops one-half volt for each mile per hour of train speed so that 50 volts indicates 100 m. p. h. The electric relay cabinet containing both the speed-pressure and wheel-slip relays is mounted at any convenient place inside the car.

[At the meeting Mr. Stewart demonstrated with a working model the functioning of the speed-pressure and wheel-slip control devices. The first demonstration was an emergency application at 100 m. p. h. and showed the automatic regulation of the brake-cylinder pressures by the speed-pressure control to correspond with the speed. Next, he demonstrated the operation of the speed-pressure control at speeds of 18 and 30 m. p. h., which showed that the maximum brake-cylinder pressure attainable for intermediate speeds is that pressure which is proper for that speed. The third demonstration showed

how the wheel-slip control detected wheel slippage and quickly functioned to lower the brake-cylinder pressure and arrest further slippage. In the last demonstration both the speed-pressure and wheel-slip controls were employed. Mr. Stewart pointed out that if a wheel slip occurs while the speed is crossing one of the speed-pressure change lines, then the brake-cylinder pressure is not restored to the original value but to the value determined by the train speed at the time of pressure restoration.—EDITOR.]

How They Voted on S. 2009

THE vote in the House of Representatives to recommit the Wheeler-Lea Bill, S.2009, (including active pairs as well as those whose votes were registered) was 220 for recommittal and 193 against. That is, if 14 of the members who voted to recommit had voted otherwise, the "blitzkrieg" would have failed.

Of the 193 votes which non-recommittal received, 115 were Republicans and 78 were Democrats. Of the 220 votes for recommittal, 172 were Democrats, 44 were Republicans, 2 were "Progressive" and one each were "Farmer Labor" and "American Labor."

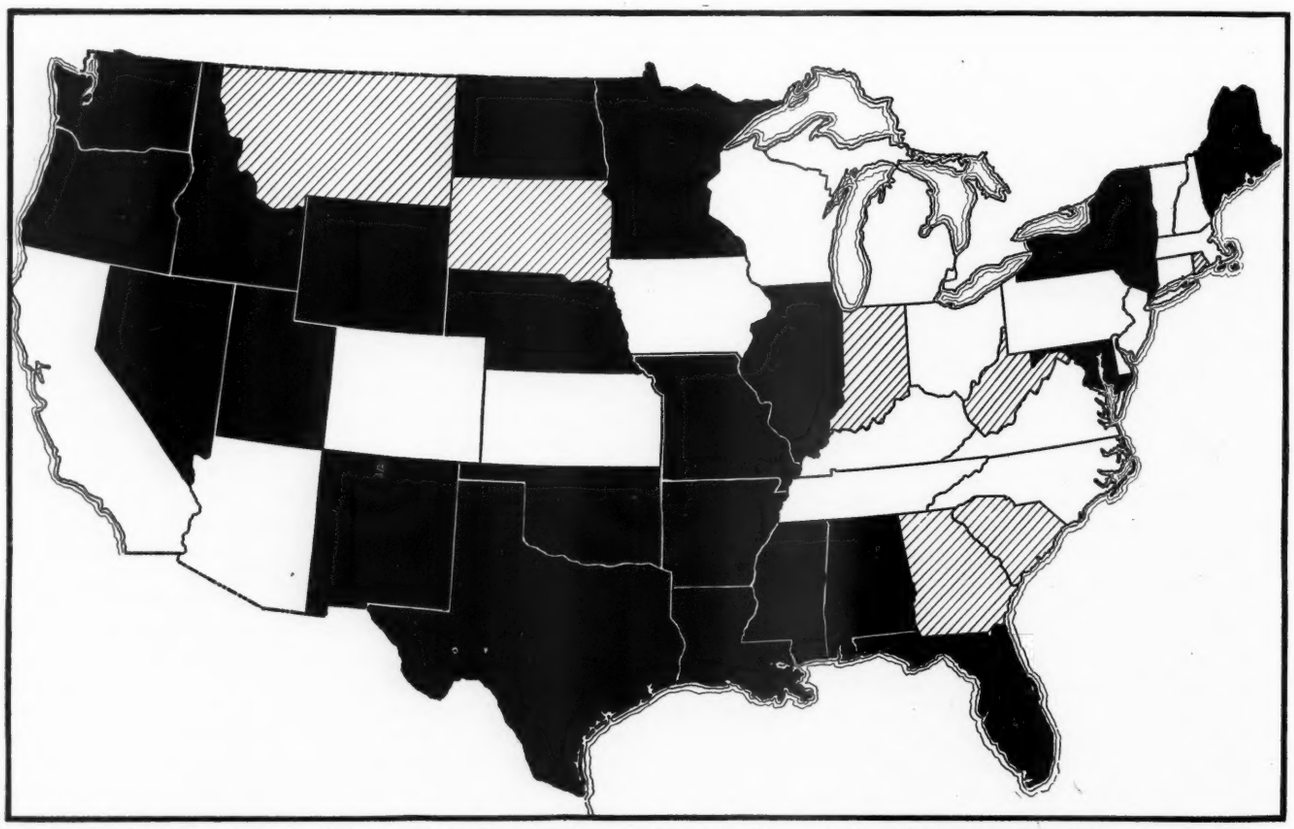
Of the 250 Democratic votes on this measure, 172 were for recommittal and only 78 against—indicating that, despite the fact that Democratic administration leaders supported this measure and that Senate and House interstate commerce committees, preponderantly Democratic, sponsored it—nevertheless *the Democratic vote was 69 per cent against dealing constructively with the transportation problem at this time.*

The attitude disclosed by the vote of Republicans was far more favorable. Of the 159 Republican votes recorded, only 44 favored recommittal. *The Republican vote in favor of constructive action regarding transportation was thus better than 72 per cent.* Proportionately, the Republicans voted with somewhat greater zeal *against* recommitting this measure than the Democrats did *for* recommitting it.

The detailed vote, which is given herewith, discloses many interesting anomalies. For instance, in the light of the general Republican approval of S.2009, how explain the fact that the delegation from Northern Illinois (which outside of Cook County is 100 per cent Republican) voted to a man for recommittal? If the answer is that Republicans in Illinois are waterway fans, then how account for the fact that the Iowa Republican delegation—right across the river—were 100 per cent against recommittal? What is the difference between Northern Illinois Republicans and Southern Wisconsin Republicans, because the latter voted as solidly against recommittal as their Illinois colleagues registered in its favor.

And why were Maine Republicans in favor of recommittal, when hardly any other New England G. O. P. legislature (and precious few Democrats) in that sector shared their views? And, coming down to New York, why were so many Republicans—headed, of course, by the railroad-baiting Culkin and the redoubtable Wadsworth—for recommittal, while G. O. P. members in adjacent states were overwhelmingly against it?

The Tammany delegation from New York was almost, but not quite, 100 per cent for recommittal—but the vote of urban Democrats in Chicago was split. Other states up and down the Atlantic Seaboard, which might be expected to reflect the views of waterway partisans as fully as New York did—as a matter of fact did not do so. The vote of New Jersey and Pennsylvania, for



Black States Are Those Where a Majority of the House Delegation Voted to Recommit the Wheeler-Lea Bill—White Ones, Where a Majority Voted Against Recommittal. Cross-Hatched States Are Those Where Neither Opposing View Attained a Majority

instance, was far more strongly against recommittal than New York's was for it.

The delegations from the states in the lower Mississippi valley voted practically solidly for recommittal — but the Ohio Valley states did not; Tennessee did not. Kansas is closer to a navigable river than Nebraska—and yet it voted against recommittal and Nebraska voted for it.

There are many other similar possibilities for reflection on this vote which are disclosed in the appended tabulation.

How the Vote Went by Districts

The number preceding the Congressman's name gives the district he represents, and the letter following indicates his political affiliation.

Alabama

For Recommittal
1, Boykin, D
4, Hobbs, D
5, Starnes, D
6, Jarman, D
8, Sparkman, D

Against Recommittal
2, Grant, D
9, Patrick, D

Not Voting
3, Steagall, D
7, Bankhead, D (Speaker)

Arizona

Against Recommittal
At L., Murdock, D

Arkansas

For Recommittal
1, Gathings, D
2, Mills, D
3, Ellis, D
4, Cravens, D
5, Terry, D
6, Norrell, D
7, Kitchens, D

California

For Recommittal
2, Englebright, R
4, Havenner, D
5, Welch, R
12, Voorhis, D
14, Ford, D
17, Geyer, D
19, Sheppard, D
20, Izac, D

Against Recommittal
1, Lea, D
3, Buck, D
6, Carter, R
7, Tolan, D
8, Anderson, R
9, Gearhart, R
10, Elliott, D
11, Hinshaw, R
13, Kramer, D
15, Costello, D
16, Ford, R

Colorado

Against Recommittal
1, Lewis, D
2, Cummings, D
4, Taylor, D

Connecticut

For Recommittal
3, Shanley, D

Against Recommittal
At L., Monkiewicz, R
1, Miller, R
2, Ball, R
4, Austin, R
5, Smith, D

Delaware

Against Recommittal
At L., Williams, R

Florida

For Recommittal
1, Peterson, D
3, Caldwell, D
4, Cannon, D

Against Recommittal
5, Hendricks, D

Not Voting
2, Green, D

Georgia

For Recommittal
1, Peterson, D
3, Pace, D
7, Tarver, D
10, Brown, D

Against Recommittal
2, Cox, D
4, Camp, D
5, Ramspeck, D
6, Vinson, D
8, Gibbs, D

Not Voting
9, Whelchel, D

Idaho

For Recommittal
1, White, D
2, Dworshak, R

Illinois

For Recommittal
At L., Smith, D
2, McKeough, D
4, Beam, D
11, Reed, R
12, Mason, R
13, Allen, R
14, Johnson, R
15, Chiperfield, R
16, Dirksen, R
17, Arends, R
18, Sumner, R
20, Barnes, D
21, Fries, D
23, Arnold, D
24, Parsons, D
25, Keller, D

Against Recommittal
At L., Martin, D
3, Kelly, D
5, Sabath, D
6, Maciejewski, D
7, Schuetz D
8, Kocialkowski, D
9, McAndrews, D
10, Church, R
19, Wheat, R
22, Schaefer, D

Not Voting
1, Mitchell, D

Indiana

For Recommittal
1, Schulte, D
9, Crowe, D
11, Larrabee, D
12, Ludlow, D

Against Recommittal
2, Halleck, R
3, Grant, R
4, Gillie, R
8, Boehne, D
10, Springer, R

Not Voting
5, Harkness, R
6, Johnson, R
7, Landis, R

Iowa

For Recommittal
2, Jacobsen, D
9, Harrington, D

Against Recommittal
1, Martin, R
3, Gwynne, R
4, Talle, R
5, LeCompte, R
6, Goodwin, R
7, Jensen, R
8, Gilchrist, R

Kansas

For Recommittal
2, Guyer, R

Against Recommittal
1, Lambertson, R
3, Winter, R
4, Rees, R
5, Houston, D
6, Carlson, R
7, Hope, R

Kentucky

For Recommittal
2, Vincent, D
8, Bates, D

Against Recommittal
1, Gregory, D
3, O'Neal, D
4, Creal, D
5, Spence, D
6, Chapman, D
7, May, D
9, Robsion, R

Louisiana

For Recommittal
1, Fernandez, D
2, Maloney, D
3, Mouton, D
4, Books, D
5, Mills, D
6, Griffith, D
7, DeRouen, D
8, Allen, D

Maine

For Recommittal
1, Oliver, R
3, Brewster, R

Maryland

For Recommittal
1, Ward, D
3, D'Alesandro, D
5, Sasscer, D
6, Byron, D

Against Recommittal
2, Cole, D

Not Voting
4, Kennedy, D

Massachusetts

For Recommittal
3, Casey, D
8, Healey, D
11, Flaherty, D
12, McCormack, D

Against Recommittal
1, Treadway, R
2, Clason, R
4, Holmes, R
5, Rogers, R
6, Bates, R
7, Connery, D
9, Luce, R
10, Tinkham, R
13, Wigglesworth, R
14, Martin, R
15, Gifford, R

Michigan

For Recommittal
1, Tenerowicz, D
9, Engel, R
11, Bradley, R
12, Hook, D
14, Rabaut, D
15, Dingell, D
17, Dondero, R

Against Recommittal
2, Michener, R
4, Hoffman, R
5, Jonkman, R
6, Blackney, R
7, Wolcott, R
8, Crawford, R
10, Woodruff, R
13, McLeod, R
16, Lesinski, D

Not Voting
3, Shafer, R

Minnesota

For Recommittal
1, Andresen, R
3, Alexander, R
4, Maas, R
7, Andersen, R
8, Pittenger, R
9, Buckler, Farm-Lab.

Against Recommittal
2, Ryan, D
5, Youngdahl, R
6, Knutson, R

Mississippi

For Recommittal
1, Rankin, D
2, Doxey, D
3, Whittington, D
4, Ford, D
5, Collins, D
6, Colmer, D
7, McGeehee, D

Missouri

For Recommittal
1, Romjue, D
2, Nelson, D
3, Duncan, D
4, Bell, D
5, Shannon, D
6, Wood, D
7, Short, R
8, Williams, D
9, Cannon, D
10, Zimmerman, D
11, Hennings, D
12, Anderson, D

Against Recommittal
13, Cochran, D

Montana

For Recommittal
2, O'Connor, D

Against Recommittal
1, Thorkelson, R

Nebraska

For Recommittal
1, Sweet, R
2, McLaughlin, D
3, Stefan, R
5, Coffee, D

Against Recommittal
4, Curtis, R

Nevada

For Recommittal
At L., Scrugham, D

New Hampshire

Against Recommittal
1, Jenks, R
2, Stearns, R

New Jersey

For Recommittal
3, Sutphin, D
8, Seger, R
13, Norton, D
14, Hart, D

Against Recommittal
1, Wolverton, R
2, Jeffries, R
4, Powers, R
5, Eaton, R
6, McLean, R
7, Thomas, R
9, Osmers, R
10, Hartley, R
11, Vreeland, R
12, Kean, R

New Mexico

For Recommittal
At L., Dempsey, D

New York

For Recommittal
At L., Merritt, D
At L., O'Day, D
3, Pfeifer, D
4, Cullen, D
5, Evans, D
6, Somers, D
7, Delaney, D
8, O'Toole, D
9, Keogh, D
10, Celler, D
11, O'Leary, D
12, Dickstein, D
13, Sullivan, D
14, Edelstein, D
15, Kennedy, D
16, Fay, D
19, Bloom, D
20, Marcantonio, Am.-Lab.
21, Gavagan, D
22, Lynch, D
28, Byrne, D
29, Cluett, R
30, Crowther, R
31, Kilburn, R
32, Culkin, R
37, Cole, R
39, Wadsworth, R
40, Andrews, R
41, Harter, R
42, Schwert, D

AGAINST RECOMMITTAL
1, Hall, R
2, Barry, D
17, Barton, R
18, Kennedy, D
23, Buckley, D
25, Gamble, R
26, Fish, R
27, Rockefeller, R
33, Douglas, R
34, Hall, R
35, Hancock, R
36, Taber, R
38, O'Brien, R
43, Reed, R

NOT VOTING
24, Fitzpatrick, D

North Carolina

FOR RECOMMITTAL
1, Warren, D
2, Kerr, D
3, Barden, D
11, Weaver, D

AGAINST RECOMMITTAL
4, Cooley, D
5, Folger, D
6, Durham, D
7, Clark, D
8, Burgin, D
9, Doughton, D
10, Bulwinkle, D

North Dakota

FOR RECOMMITTAL
At L., Burdick, R
At L., Lemke, R

Ohio

FOR RECOMMITTAL
1, Elston, R
2, Hess, R
9, Hunter, D
10, Jenkins, R
14, Harter, D
19, Kirwan, D
20, Sweeney, D
21, Crosser, D

AGAINST RECOMMITTAL
At L., Bender, R
At L., Marshall, R
3, Routzohn, R
4, Jones, R
5, Clevenger, R
6, Polk, D
7, Brown, R
8, Smith, R
11, Claypool, D
12, Vorys, R
15, Secrest, D
16, Seccombe, R
17, McGregor, R
18, Lewis, R
22, Bolton, R

NOT VOTING
13, White, R

Oklahoma

FOR RECOMMITTAL
1, Disney, D
2, Nichols, D
3, Cartwright, D
5, Monroney, D
6, Johnson, D
7, Massingale, D

AGAINST RECOMMITTAL
4, Boren, D
8, Ferguson, D

NOT VOTING
At L., Rogers, D

Oregon

FOR RECOMMITTAL
1, Mott, R
2, Pierce, D
3, Angell, R

Pennsylvania

FOR RECOMMITTAL
3, Bradley, D
12, Flannery, D
14, Moser, D
24, Snyder, D
25, Faddis, D
28, Allen, D
32, Eberharter, D
33, McArdle, D
34, Dunn, D

AGAINST RECOMMITTAL
1, Sacks, D
2, McGranery, D
4, Sheridan, D
5, Gartner, R
6, Myers, D
8, Wolfenden, R
9, Gerlach, R
10, Kinzer, R
11, Boland, D
13, Fenton, R
15, Rutherford, R
16, Rich, R
17, Ditter, R
18, Simpson, R
19, Kunkel, R
20, Jarrett, R
21, Walter, D
22, Gross, R
23, Van Zandt, R
26, Graham, R
27, Tibbott, R
29, Rodgers, R
30, Corbett, R
31, McDowell, R

NOT VOTING
7, Darrow, R

Rhode Island

FOR RECOMMITTAL
2, Sandager, R

AGAINST RECOMMITTAL
1, Risk, R

South Carolina

FOR RECOMMITTAL
1, McMillan, D
2, Fulmer, D
5, Richards, D

AGAINST RECOMMITTAL
4, Bryson, D
6, McMillan, D

NOT VOTING
3, Hare, D

South Dakota

FOR RECOMMITTAL
2, Case, R

AGAINST RECOMMITTAL
1, Mundt, R

Tennessee

FOR RECOMMITTAL
3, Kefauver, D
8, Cooper, D
9, Davis, D

AGAINST RECOMMITTAL
1, Reece, R
2, Jennings, R
4, Gore, D
5, Byrns, D
6, Courtney, D
7, Pearson, D

Texas

FOR RECOMMITTAL
2, Dies, D
3, Beckworth, D
5, Sumners, D
6, Johnson, D
7, Patton, D
8, Thomas, D
9, Mansfield, D
10, Johnson, D
11, Poage, D
12, Lanham, D
13, Gossett, D
14, Kleberg, D
15, West, D
18, Jones, D
19, Mahon, D
20, Kilday, D
21, South, D

AGAINST RECOMMITTAL
1, Patman, D
4, Rayburn, D
16, Thomason, D
17, Garrett, D

Utah

FOR RECOMMITTAL
1, Murdock, D
2, Robinson, D

Vermont

AGAINST RECOMMITTAL
At L., Plumley, R

Virginia

FOR RECOMMITTAL
1, Bland, D

AGAINST RECOMMITTAL
3, Satterfield, D
4, Drewry, D
5, Burch, D
6, Woodrum, D
7, Robertson, D
8, Smith, D
9, Flannagan, D

NOT VOTING
2, Darden, D

Washington

FOR RECOMMITTAL
1, Magnuson, D
2, Wallgren, D
3, Smith, D
4, Hill, D
5, Leavy, D
6, Coffee, D

West Virginia

FOR RECOMMITTAL
3, Edmiston, D
4, Johnson, D
5, Kee, D

AGAINST RECOMMITTAL
1, Schiffler, R

NOT VOTING
2, Randolph, D
6, Smith, D

Wisconsin

FOR RECOMMITTAL
7, Murray, R
8, Johns, R
9, Hull, Prog.
10, Gehrmann, Prog.

AGAINST RECOMMITTAL
1, Bolles, R
2, Hawks, R
4, Schafer, R
5, Thill, R
6, Keefe, R

Wyoming

FOR RECOMMITTAL
At L., Horton, R

Vermont Compares R.Rs vs. Trucks

(*Continued from page 858*)

movable property like trucks for transportation security." His wire read further: "Of course regulation and taxation of trucks 'for-hire' should be extended to fully cover cost of public interest therein to at least the same degree as the railroads, and if this is done I don't think we need worry about transportation security." Mr. Smith also expanded his ideas on the stand. Although he owns a small fleet of trucks for delivery to customers, it is O. K. with him to raise taxes on trucks if necessary to pay for roads. It was his opinion that trucks having a width of 8 ft. and over "leave a very narrow margin of safety" on Vermont's highways and that the present road system is not capable of sustaining trucks up to the present weight limit. He opined that railroad taxes are relatively unfair and that the carriers should be taxed on "productive capacity."

H. England, representing the Barre granite industry, said that in 1939 the district shipped out 87,500 tons of stone by rail and 25,000 tons by truck. While a large number of pieces are too bulky for truck transportation, the latter is used chiefly to satisfy dealers carrying small inventories or requiring immediate delivery. He advocated making the reduction of railroad taxes permanent. T. H. Weed, representing a large dairy concern which ships 11 cars of milk daily out of the state and brings in supplies and packaging by rail, asserted that he used no trucks for hauls between country plants and metropolitan centers and that railroad service is excellent. Upon request, he said, the carriers will place late milk cars on through passenger trains.

A grain dealer, who operates three delivery trucks, expressed the belief that Vermont highways are unfit for large trucks. He said the cost of getting in his products would "materially increase" if the railroads ceased to exist. F. M. Dano, a livestock dealer, and president of the Vergennes Chamber of Commerce, saw irony in the fact that "the town shares the tax on a farmer's ox and his ass but not on his truck." He claimed that Vermont roads were not designed for heavy trucks, pointing out that when the Central Vermont put on bigger locomotives it laid heavier steel. He said his organization was 100 per cent loyal to the railroad through the Rutland Railroad Co-operating Traffic Association and that "we have received full co-operation from the Rutland management."

L. Stevens, president, Vermont Permanent Roads Association, appeared as a private citizen who has lived for 50 years in the state and placed on the record two personal letters which he received from a close friend of his and a born Vermonter—Daniel Willard. The letters of the Baltimore & Ohio president told of the competitive handicaps which the railroads face but looked forward to an enlightened public opinion by education. Mr. Stevens hoped the commission would consider the viewpoint of such an "honored, honest, respected man."

Aftermath of S. 2009 Recommittal

Bill still appears to be dead but labor groups are reported anxious to breathe new life into it

WASHINGTON, D. C.

WARNINGS from House Majority Leader Rayburn, Senator Wheeler and other authoritative sources that recommittal of S. 2009 would mean its death are being borne out in developments since May 9 when the House of Representatives by a vote of 209 to 182 sent that omnibus transportation bill back to conference with instructions directing the House conferees to insist upon restoration of the toughened-up version of the Harrington "labor-protection" amendment and the Wadsworth and Jones amendments. Conferee Lea, chairman of the House committee on interstate commerce, stated this week that he had no present plans to seek a resumption of conferences with the Senate group, while Senator Wheeler has reiterated the view which he expressed prior to the House action to the effect that the latter comprised a writing of the bill's death warrant. Also, Senator Reed, Republican of Kansas, has indicated that he thought there was little hope of reviving the measure.

The foregoing appears to be the situation as this issue of *Railway Age* goes to press, despite this week's Washington meetings of the Railway Labor Executives' Association, which have given rise to reports that the six brotherhood chiefs who were major factor in the success of the recommittal move are now endeavoring to breathe new life into the measure. Among the matters before the R. L. E. A. meeting was a movement to work out some sort of a proposal which might induce the conferees to resume work on the bill. In this connection it is understood that delegations from the labor group called on representatives of the Association of American Railroads, and also contacted members of the conference committee. The A. A. R. is understood to have turned a cold shoulder to suggestions that the railroads might be induced to go along with a compromise "labor-protection" proposal if it were anything like the Harrington amendment; while the conferees approached were unimpressed, at least with the initial overtures of the labor emissaries.

Rail Labor Opposition Killed Bill

Meanwhile there seems to be general agreement among informed observers that the push which killed the bill came as a result of the eleventh-hour action of the six transportation brotherhoods, which lined up with the waterway bloc and groups claiming to speak for agriculture. Had these railway labor organizations persevered in what the conferees had been led to believe was their position in support of the conference report, there is little doubt that the recommittal motion would have been defeated and the conference report adopted. The support which the report drew from the other railway labor organizations led by George M. Harrison, president of the Brotherhood of Railway Clerks, and B. M. Jewell, president of the Railway Employees' Department, American Federation of Labor, was just not sufficient to counteract the attack of transportation-union leaders. The latter are: A. Johnston, grand chief engineer, Brotherhood of Locomotive Engineers; D. B. Robertson, president of the Brotherhood of Locomotive Firemen & Enginemen; J. A. Phillips, president, Order of Railway Conductors; A. F. Whitney, president, Brotherhood of Railroad Trainmen; T. C. Cashen, president, Switchmen's Union of North America; and V. O. Gardner, president, Order of Railroad Telegraphers. As noted in previous issues, Mr. Robertson, with Messrs. Harrison and Jewell, was a member of President Roosevelt's committee-of-six out of the recommendations of which S. 2009 grew.

With reference to his aforementioned lack of disposition to seek a resumption of conferences at this time, Chairman Lea explained that his committee has before it other matters which are expected to keep the members busy for the time being. Also, the chairman is understood to feel that it would be futile to attempt to get the Senate conferees to agree to follow the House's instructions to restore the controversial amendments; and even if such agreement could be reached in conference, new opposition to the measure would arise among those who regard the amendments as destructive. At least two of the Senate conferees are reported to have served notice that they will not accept the Harrington amendment either in its original or its present form—the most they would be disposed to do would be to write the Washington Agreement into the bill.

Bill Couldn't Hurt Labor

There has, of course, been no authoritative explanation of the change of front on the part of the six transportation brotherhoods, although there has been some speculation in that connection. It has been suggested that President Whitney of the B. of R. T. won what would be appraised in railway labor circles as a victory when the conferees eliminated the consolidation provisions entirely; and that the leaders of the other transportation brotherhoods decided that they, too, must get credit for having done "something" for the "boys." Thus the demand for recommittal in which they were joined by Mr. Whitney. Other speculations run to predictions that a deal was made for the waterway bloc's support of future "make-work" bills in which railway labor may be interested. Certainly, railway labor came off with no present gain, because any effect on employees of the bill's enactment could only have been favorable. To the extent that the bill's water-carrier provisions tended to eliminate destructive competition, the result would be a preservation of railroad jobs; and so far as consolidations are concerned the bill did not propose to change the present law—so employees could have been no worse off in that connection.

The foregoing point of view was developed by Conferee Wolverton, Republican of New Jersey, in the course of his speech against recommittal, when he reminded his colleagues that "railroad labor stands to lose more under present conditions because of unregulated water carriers than by consolidation of railroads." Previously Mr. Wolverton had referred to the action of the six transportation brotherhoods as "the most unusual action of labor representatives that I have ever experienced."

"This action," he went on, "is all the more strange

and unexplainable in view of the fact that each of the brotherhoods these representatives speak for has, at every annual convention in the last 10 or more years, discussed and favored legislation that would bring water carriers under regulation. And now the bill which seeks to do this thing is being opposed by them. And, bear in mind, that it is being opposed by them not because of what is in the bill, but something that is totally foreign to water-carrier regulation, is not in the bill, namely, power and authority for railroads to consolidate. Thus, because the conferees eliminated the most fear-provoking provision in the bill, from the standpoint of railroad labor, we now find certain brotherhood representatives joining hands with water carriers to recommit the bill and thereby create the possibility of no legislation to regulate water carriers. My astonishment at this strange and unusual action cannot be adequately expressed in words."

Debate Time Equally Divided

The two hours of debate got under way after nearly an hour of wrangling over who should control the time. There was no dispute over the equal division of the time between those favoring adoption of the conference report and those favoring recommittal; but there was objection to leaving Representative Wadsworth, Republican of New York, in control of the opposition's time—sticklers for form insisted that Chairman Lea should control all the time. That was what finally happened with the understanding that Mr. Lea would allot the opposition's time in the light of promises made by Mr. Wadsworth when he thought he would control the recommitters' hour. Majority Leader Rayburn had never heard "so much fuss raised about tweedle dee and tweedle dum."

It was just before the motion to recommit was offered by Mr. Wadsworth that Mr. Rayburn issued his aforementioned warning that recommittal would perhaps mean death of the bill. "It does appear to me," he said, "that if this bill is recommitted there will be no legislation upon this subject during the current year and these amendments that various gentlemen are talking about will never come back, and if the bill is recommitted they will die with it. It is my opinion that there is so much good in this bill, so much that is necessary to have a coordinated, workable transportation system, that we are taking upon ourselves a great responsibility by casting a vote that will kill all railroad legislation at this session of the Congress."

But the recommitters remained unimpressed; as previously identified by Conferee Cole, Democrat of Maryland, they were by and large opponents of any legislation at all, and there was nothing in the fight to recommit "except the adroitness of a group of members opposed to the bill in most any form." The same view was expressed by Conferee Bulwinkle, Democrat of North Carolina, when he recalled that of the 12 or 13 members speaking in favor of recommittal, all but two had voted against the bill last July when it contained the Harrington, Wadsworth and Jones amendments. While he conceded that he had thus acted last July, Representative Harrington, Democrat of Iowa, sponsor of the Harrington amendment, guaranteed this time to vote for the bill if it came back with the House amendments reinserted.

Conferee Crosser Voted to Recommit

The highlight of the vote on the recommittal motion was perhaps the "aye" of Conferee Crosser, Democrat of Ohio. All other conferees voted against recommittal and all others, except Representative Holmes, Republican of Massachusetts, spoke against the Wadsworth motion. Seated directly across the aisle from Chairman Lea, Mr. Crosser seemed to be following the roll call with intense interest; he perked up a bit as the clerk reached the C's and came through with his "aye" when his name was called. His adverse vote had been anticipated by Conferee Cole who said in his above-mentioned talk: "We have left the conference hand in hand, a united group, until a little while ago I heard that one member would likely vote against what has signature recommended. Such is his privilege. For him I have nothing but the greatest respect and regard, but with that exception we ask as your conferees to let this bill become law and renew your fight for certain changes here and there in the form of special legislation dealing with those isolated subjects."

Chairman Lea opened the debate with a 25-minute talk against recommittal. Developing his argument along the lines of the extension of remarks he put into the May 3 Congressional Record, as noted in last week's issue, he asserted that no proposal was made in the recommittal motion "to strike a single sentence from the bill"—the only proposals are "to change the present law." He identified the source of the "whole trouble" in the inter-union fight as to what should be done about the Harrington amendment, which he called "about as wild a proposition as this House was ever asked to approve." Mr. Lea proceeded to highlight his arguments against the Jones and Wadsworth amendments before yielding to Representative Wadsworth who based his opposition to the bill "largely" on the ground that he could see no necessity for regulating water carriers.

Mr. Wadsworth was not there to abuse the railroads whose friend he said he has been "on many occasions;" but he was disposed to insist on the Miller-Wadsworth amendment as a provision conceived in "a desperate attempt to leave the door open just a little way to the little man who wants to engage in water transportation." The New Yorker was followed by Representative Warren, Democrat of North Carolina, who warned those favoring the bill that it would become an issue in the next campaign. As he recalled it "the greatest political graveyard the House has probably ever known followed the passage of the Esch-Cummins Act, and those who voted for it were swept into oblivion."

Next came the aforementioned talk of Conferee Cole, followed by that of Congressman Harrington who argued for his labor-protection amendment. Representative Van Zandt, Republican of Pennsylvania, then came along with a warning that "the crucial hour has arrived for transportation legislation in this Congress." He predicted that if the bill were recommitted "railroad legislation for this Congress and the next few years is out of the question." Representative Jones, Democrat of Texas, spoke in favor of his amendment; while Representative Culkin, Republican of New York, urged recommittal and expressed the hope that thereafter the bill, which he called a "Trojan horse," would "never again see the light of day."

Halleck Calls for Consistency

Conferee Halleck, Republican of Indiana, stressed the fact that the country is committed to a policy of regulating transport agencies; and thus he saw no reason why it is not fair to extend such regulation to water carriers. "The strange thing about it," he said, "is that some of the people who would vote the quickest to keep away from regulation of water carriers seem to be the most intent here today to clamp down on the railroads the ultimate degree of regulation." After a four-minute talk in favor of recommittal by Representative Bland,

Democrat of Virginia, the aforementioned speech of Conferee Wolverton was heard. Then came Representative Hope, Republican of Kansas, ranking minority member of the House committee on agriculture, who did not agree that farmers were opposed to the bill. "Anything which will help the railroads of this country to render better and more efficient service to farmers will help agriculture," he said.

Representative Dondero, Republican of Michigan, was opposed to the bill because it seeks to change the policy of keeping "free from regulation water transportation facilities for our people." Representative Kleberg, Democrat of Texas, called the conference report "a discrimination bill rather than a transportation bill;" while Representative Alexander, Republican of Minnesota, was opposed because of the "attempted extension of bureaucracy." Meanwhile it was difficult for Representative Sparkman, Democrat of Alabama, to understand "how any nation . . . blessed with a great inland waterway system . . . could take action . . . to cut out completely the rights that the public is entitled to in the enjoyment of that inland waterway system for the transportation of their commodities." Representative Eberharter, Democrat of Pennsylvania, suggested that "certainly no harm can be done by recommitting this bill with the amendments already adopted by the House, and which the railroads will be glad to have at this time." A "brief reading" of the conference report indicated to Representative Brewster, Republican of Maine, that the conferees had "reconciled the differences between the House and Senate by eliminating the passages upon which the House and Senate were agreed." Representative Thomas, Democrat of Texas, told of his disposition to vote for recommittal "with the hope that the bill can be perfected;" while Representative Murdock, Democrat of Arizona, was against recommittal after he received assurance that the long-and-short-haul clause was "safeguarded." Another one-minute speaker against recommittal was Representative May, Democrat of Kentucky.

Conferee Bulwinkle took the balance of the time allotted for the debate to make his above-mentioned remarks against recommittal. It was during the course of Mr. Bulwinkle's talk that Majority Leader Rayburn arose to make his prediction that recommittal would probably mean the death of the measure. The debate closed in a heated exchange between Mr. Bulwinkle and Representative Brewster of Maine. After that Mr. Wadsworth came forward to offer his motion to recommit, on which Mr. Lea demanded the roll call.

The Preliminary Barrage

On the day prior to the debate several pages of the Congressional Record were filled with a preliminary barrage laid down by the bill's opponents. This material included a statement from President Robertson of the B. of L. F. & E. who commented on a letter written to members of the conference committee by Judge R. V. Fletcher, vice-president and general counsel of the Association of American Railroads, after the position of the transportation unions in favor of recommittal had become known. Also, there was reproduced a letter written by President Whitney of the B. of R. T. to Chairman Lea, wherein the former undertook to reconcile his position in favor of recommittal with that statement of his April 29 telegram which said that the elimination of the consolidation provisions had removed the source of the B. of R. T. opposition to S. 2009. Other documents inserted included communications from various representatives of the transportation brotherhoods urging recommittal.

Commenting on the House's action at his May 9 press conference, Jesse H. Jones, federal loan administrator, said that improved conditions in the railroad industry had not lessened the need for the legislation. The bill, if passed, he added, would have helped save some roads from reorganization. But, Mr. Jones went on, "it has always been hard to get railroad legislation in Congress. There are so many different interests to satisfy. It shouldn't be, but it is. Such action is not encouraging to the railroads." Meanwhile the loan administrator pointed out that S. 2009's provision whereby the limit of Reconstruction Finance Corporation loans and commitments to railroads would be increased from $350,000,000 to $500,000,000 in addition to loans and commitments made prior to January 31, 1935, and renewals of loans and commitments so made is embodied also in S. 3938 and H. R. 9687, pending bills to amend the R. F. C. Act.

New Books . . .

Proceedings Association of American Railroads, Mechanical Division, 1938-39. Published by the association, 59 E. Van Buren street, Chicago. 780 pages. Price to members $5; to nonmembers $10.

The sessions of the Operations and Maintenance Department, Mechanical Division, held at the Hotel Commodore, New York, June 28-30, are covered in the 1938-39 proceedings, also recommendations, letter ballots and other transactions for the two years. The subjects report on at the New York meeting were lubrication of cars and locomotives; specifications for materials; wheels; brakes and brake equipment; arbitration; prices for labor and materials; tank cars; loading rules; couplers and draft gears; car construction; reciprocating steam locomotives, and utilization of locomotives. Bound in at the back cover of the proceedings are Summary Sheets of Operating Statistics, Class I Railroads, Year 1938 compared with Year 1937, which formed a part of the report of the Committee on Utilization of Locomotives.

Proceedings Car Department Officers' Association, 1939.—Published by the Association—Secretary-treasurer, F. L. Kartheiser, chief clerk—mechanical, Chicago, Burlington & Quincy, Chicago. 251 pages. Price $2 (including membership fee).

The proceedings of the annual convention of the Car Department Officers' Association, held at the Hotel Sherman, Chicago, October 17, 18 and 19, 1939, contain the reports of the committees on Freight and Passenger-Car Construction and Maintenance; Shop Operation, Facilities and Tools; Passenger Train Car Terminal Handling; Lubricants and Lubrication; Use of Freight Equipment for Loading Contaminating Commodities; Interchange; Loading Rules; Billing for Car Repairs, and Painting. Included also in the proceedings are the addresses by D. J. Sheehan, superintendent motive power, C. & E. I.; C. H. Dietrich, executive vice-chairman, Freight Claim Division, Association of American Railroads; LeRoy Kramer, vice-president, General American Transportation Company, and L. W. Baldwin, chief executive officer, Missouri Pacific Lines, Mr. Baldwin's address was presented before a joint meeting of the Coordinated Associations—the Master Boiler Makers' Association, the Railway Fuel and Traveling Engineers' Association, the Locomotive Maintenance Officers' Association, and the Car Department Officers' Association.

"GRAND" AND "TRUNK" will be the Christian names of twin sons recently born to Mr. and Mrs. W. L. Scott, if Mister has his own way. Mr. Scott, who is a Grand Trunk-Canadian National traffic representative at New York, has definitely decided on these two names and is trying to convince his wife to agree, according to the Canadian National "Weekly News Letter."

NEWS

No Explosives Blew Up in '39

Explosives bureau reports best year on record in dangerous articles handling

Total losses in the transportation of explosives and other dangerous articles on railroads in the United States and Canada were the lowest in 1939 of any year since the Bureau of Explosives, Association of American Railroads, was organized, according to the report of W. S. Topping, chief inspector, for 1939. In the transportation of so-called "dangerous explosives" there were no explosions, no deaths and no personal injuries during the year. Including all other dangerous articles under the jurisdiction of the Bureau, there were 74 fires, 3 deaths and 22 persons injured during the year. There were also 32 cases when explosives were involved in what the Bureau calls "near accidents," of which 10 were instances where damage to containers could definitely be charged against carriers' rough handling of cars while the remaining instances were charged to shippers' failure to properly load and brace their explosives and failure of the railroads to properly prepare cars for loading.

A comparative summary showing transportation losses chargeable to explosives and other dangerous articles shows that in 1939 a total of 842 accidents occurred involving a property loss of $114,477 (final corrected figure), the lowest property loss figure since the Bureau of Explosives started operation in 1907. The 1939 record compares with 853 accidents and property loss of $312,741 for 1938. A table listing the particular causes of accidents under the Bureau's jurisdiction indicates that derailment or collision proved to be the chief source of loss, amounting to $86,587 out of the total loss of $114,477. Improper loading or defective containers, the second greatest cause of loss, accounted for $11,163.

As of the close of the year, the staff of the Bureau comprised 16 field work inspectors, a new man having been added during the year. Railroad membership of the Bureau increased from 323 in 1938 to 402 in 1939.

Given special treatment in Mr. Topping's report were the tank car department and the current revision of regulations. He pointed out that the tank car committee of the Bureau transmitted for comments and suggestions a total of 380 applications for approval of designs, materials and construction of new cars and of changes in existing cars. Reports from the committee show that the railroads were obliged to transfer the contents of 184 tank cars during the year due to defects. A special table in the report indicates that the hazard of bottom outlet failures has been materially reduced in recent years by the increase in the number of tank cars equipped with valves of the screw-closure type; cars built prior to 1927 were equipped with discharge outlets of the spring-closure type. Property loss from reported tank car leakages due to bottom outlet failure, for example, declined from a high of $348,185 in 1926 to $9,562 in 1939.

The report points out that the Bureau has been preparing a proposed general revision of regulations which will come before the I. C. C. very shortly. The revision is being made to embrace in simple form new rules and modifications made necessary by improvements in shipping containers. Since the last revision in 1930, it has been necessary for the Bureau to issue some 18 supplements, which have caused confusion.

Thumbs Down on Trainload Gasoline

A proposed trainload rate for gasoline from southwest points to 12 north mid-west points was rejected at a meeting of the Western Trunk Line Committee and the Southwestern Freight Bureau at Chicago on May 8. The proposed rate, endorsed by several independent refineries and the Midland Co-Operative Wholesale, was 15 cents a hundred pounds less than the present group three rate and carried a minimum of 40 cars.

Pullman Car Named for George Westinghouse

A standard Pullman sleeping car named for George Westinghouse, inventor of the airbrake, was placed in regular service on May 9 on the Pennsylvania's "Clevelander" at a special ceremony at Pennsylvania station, Pittsburgh, Pa. Presidents of the representative veteran employees' associations of Westinghouse Airbrake Company and the Westinghouse Electric & Manufacturing Co., took part in the ribbon cutting that formally started the car on its way. This is the same station from which the first train to be equipped with airbrakes started on its famed demonstration run over the P. R. R. Panhandle division to Steubenville, Ohio, on April 15, 1869.

Seek to Hike Pay to Jobless

Carriers agree to some increase, but want assessments cut too

Public hearings before a Senate interstate commerce subcommittee consisting of Senators Wagner of New York, Minton of Indiana, and Schwartz of Wyoming, Democrats, and Gurney of South Dakota, Republican, and Shipstead of Minnesota, Farmer-Laborite, got under way on May 13, on two bills recently introduced, S. 3920 and S. 3925, both intended to increase benefit payments under the Railway Unemployment Insurance Act. As pointed out in last week's issue, S. 3920, offered by Senator Wagner, represents the views of railroad labor; while the other bill, S. 3925, introduced by Senator Gurney, embodies the views of railroad management.

Briefly, the philosophy of the two bills may be said to agree on the basic tenets that the reserve fund for the payment of benefits to unemployed workers is too large and that the amount of benefits should be increased. Testimony at the initial hearing brought out the fact that the labor bill would preserve the present three per cent tax on the payroll of the carriers and would increase present benefits by some 115 per cent of the present rate; while the management bill would provide for a rating system so that if the employment record of the railroads remains good the rate of the tax may be gradually reduced as is the practice in some of the states. Moreover, the management bill would increase the present benefit payments by about 25 per cent.

The first witness for the labor organizations was Charles M. Hay, counsel for the Railway Labor Executives Association, who, after outlining the history of the present law, told the subcommittee that the real purpose of S. 3920 was to liberalize the present law and the administration of the law. He also declared that the present three per cent tax is not only adequate to sustain the increased benefits, but is more than adequate to support the present payments as is evidenced by the fact that there is now more than $125,000,000 of a surplus in the unemployment insurance account in the United States Treasury.

After declaring that the present benefits are "indefensibly low" and that the railroad working men demand a liberalization of the law, Mr. Hay asked the committee

to give the labor measure immediate attention so that it might be enacted at this session of the Congress. He also devoted a little time to attacking the Gurney bill, saying that that measure lays its emphasis on the tax rate and not on the adequacy of the benefit payments. He also opposed the sliding scale of tax payments which is incorporated in S. 3925.

Dr. J. H. Parmelee, director of the Bureau of Railway Economics of the Association of American Railroads, was the lead-off witness for the carriers. Dr. Parmelee opposed the liberal provisions of the Wagner bill, saying that the country has not had sufficient experience with unemployment insurance to date to tell whether the fund now accumulated is large enough to warrant the increase in benefit payments which would be brought about by the enactment of S. 3920. He then analyzed the provisions of S. 3925, calling it a simpler and more concisely drawn bill and much easier of construction. This bill, he said, embodies the merit rating principle which is in use in many of the states. Under this plan an employer who maintains a good record of employment may have the rate of his tax reduced to less than one per cent in some cases.

The railroad witness agreed that some increase in benefit payments is justified and he added that the management bill puts the benefit payments on a basis with the better state acts. He also pointed out to the subcommittee that railroad management is now paying more tax for unemployment insurance and retirement than are any other employers in the country. He felt that the carriers' record would justify some sliding scale reduction in the tax.

At the May 14 session R. L. Ettenger, Jr., assistant to the vice-president in charge of accounting of the A. A. R., analyzed the bills section by section.

J. M. Souby, assistant general counsel of the A. A. R., suggested to the committee that a provision be inserted in the Gurney bill to provide that the tax rate payable by the carriers could not be less than two per cent in the next fiscal year. This move was made to allay the labor claim that the tax rate would be cut from three to one per cent as soon as the Gurney bill was enacted into law.

J. A. Farquharson, legislative representative of the Brotherhood of Railroad Trainmen, told the subcommittee that his organization, having some 130,000 members, agreed with the position of the other brotherhoods that the tax should not be reduced and that the benefits should be increased.

The final witness at the hearing was Murray W. Latimer, chairman of the Railroad Retirement Board, the agency which administers the unemployment insurance law. He felt that there should not be any tax reductions until the board can be sure that the benefit payments are adequate. Commenting on the cost of labor's version, Mr. Latimer told the committee that his best guess over a period of years was that the amendments would cost about 100 per cent more rather than 115 per cent. The 115 per cent increase in cost, he said, was an overstatement.

At this point Senator Gurney asked Mr. Latimer whether it wouldn't be better in good years for the railroads to build up reserves rather than pay the profits out in taxes so that the carriers would be able to keep men on in depression rather than laying them off. Mr. Latimer had no clear-cut answer, but later said that the railroads could not be depended upon to follow such a policy, nor could other companies.

Discussing the subject of merit rating, Mr. Latimer declared that there is no evidence as yet that employers can stabilize their employment except within very small limits. As a result, he had very little faith in this feature of the railroad bill.

Mr. Hay, in a short rebuttal, urged that the benefits of the federal law should be as liberal as any state law; in fact, he would have the federal government lead the movement for the liberalization of unemployment benefit payments. He closed by asking for immediate consideration of the bill and favorable action on it so that railroad labor could get the benefits of this $125,000,000 reserve which is now lying idle in the Treasury.

Status of R. F. C. Rail Loans

The monthly financial statement of the Reconstruction Finance Corporation as of April 30, shows loans to railroads (including receivers) of $696,974,461 and repayments of $225,227,712.

Official-Southern Divisions

The Interstate Commerce Commission has further postponed from May 1 until May 31 the effective date of its order of June 25, 1939, in the No. 24160 proceeding involving divisions of joint interterritorial rates between Official and Southern territories.

Status of Stockyards Companies

The Interstate Commerce Commission has reopened its Ex Parte 127 investigation of the status of stockyard companies to permit the introduction of evidence with respect to changes made since the previous hearing affecting or alleged to affect the status of such companies. The further hearing will be held at Chicago on June 5 before Examiners Carter and Haden.

Forwarder-Bill Hearings Off Until About June 1

Hearings before a sub-committee of the Senate interstate commerce committee on S. 3665 and S. 3666, bills designed to regulate freight forwarders, will not get under way on May 24 as originally planned, but have been postponed until about June 1. The postponement is due to the fact that Chairman Wheeler and Senator Reed, Republican of Kansas, two of the three members of the sub-committee, will be away from Washington on the 24th.

Freight Car Loading

Revenue freight car loading for the week ended May 11 totaled 680,657 cars, the Association of American Railroads announced on May 16. This was an increase of 15,147 cars, or 2.3 per cent, above the preceding week, an increase of 126,013 cars, or 22.7 per cent, over the corresponding week last year, and an increase of 138,849 cars, or 25.6 per cent, over the comparable 1938 week.

As reported in last week's issue, loading of revenue freight for the week ended May 4 totaled 665,510 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings

For Week Ended Saturday, May 4

Districts	1940	1939	1938
Eastern	143,553	131,449	118,587
Allegheny	136,622	105,558	99,418
Pocahontas	48,908	13,550	31,203
Southern	99,596	91,332	86,419
Northwestern	96,061	81,446	65,952
Central Western	96,873	102,488	90,093
Southwestern	43,897	46,202	44,477
Total Western Districts	236,831	230,136	200,522
Total All Roads	665,510	572,025	536,149
Commodities			
Grain and grain products	33,171	34,016	32,549
Live stock	13,073	13,876	13,060
Coal	122,038	59,934	77,213
Coke	7,685	5,368	3,873
Forest products	31,215	30,121	25,809
Ore	35,482	16,612	7,884
Merchandise l.c.l.	149,906	153,808	150,750
Miscellaneous	272,940	258,290	225,011
May 4	665,510	572,025	536,149
April 27	644,520	585,190	543,089
April 20	628,342	557,867	523,748
April 13	618,810	547,179	537,585
April 6	602,697	534,952	522,049
Cumulative Total, 18 Weeks	11,324,713	10,345,464	9,821,301

In Canada.—Carloadings for the week ended May 4 increased to 51,257 from 50,636 for the previous week, but were 1,520 under a year ago, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
May 4, 1940	51,257	25,573
April 27, 1940	50,636	25,255
April 20, 1940	51,132	25,779
May 6, 1939	52,777	21,829
Cumulative Totals for Canada:		
May 4, 1940	857,554	441,585
May 6, 1939	754,398	381,591
May 7, 1938	798,449	388,193

Announces Policy on Private Truckers

Following the decision of Division 5 of the Interstate Commerce Commission prescribing maximum hours and safety regulations for drivers of private trucks, details of which were given in last week's issue, the Wages and Hours Division of the Department of Labor has made it known that it will not take any enforcement action with respect to alleged past violations of the overtime provisions affecting such employees. Neither will the Division take any action to collect restitution for these drivers. A statement issued by the Division points out that it will be necessary to leave the questions as to the retroactive effect of the commission's order and the collection of restitution for such period to the determination in employee suits under section 16 (b) of the Fair Labor Standards Act.

"It must be clearly understood, however," continues the statement, "that this statement of the enforcement policy of the

Wage and Hour Division with respect to such employees is not to be construed so as to impair or otherwise prejudice the right of any such employee under section 16 (b) of the Fair Labor Standards Act to recover unpaid overtime compensation computed at the rate prescribed in section 7 of the act for the period prior to the time the Interstate Commerce Commission regulations become effective (August 1, 1940)".

Johnson Confirmed for I. C. C.

The Senate on May 14 confirmed President Roosevelt's appointment of J. Monroe Johnson to the Interstate Commerce Commission to succeed Marion M. Caskie. A photograph and biographical sketch of Mr. Johnson was published in the *Railway Age* of May 11, page 827.

Davidson Appointment Confirmed by Senate

The Senate on May 8 confirmed President Roosevelt's appointment of Edward H. Davidson as assistant director of the Interstate Commerce Commission's Bureau of Locomotive Inspection.

New Haven Sets Up Buffet on Merchants' Limited

A buffet supper, served from a specially-prepared table, from which guests may have as many helpings as they please, has been inaugurated by the New York, New Haven & Hartford to supplement dining-car facilities on its New York-Boston Merchants' Limited. In offering this service, the railroad believes it has the advantages of allowing the passenger to see in advance the dishes prepared for him; that the service will enable a greater variety of dishes to be served; and that those passengers not desiring a heavy, full-course dinner may choose a lighter meal at smaller cost. While such a service has been used by large hotels for many years, it is understood that it has never been regularly available before on railroad dining cars.

The buffet supper on the Merchants' will be served at a fixed price of $1.25 for which passengers may have as many items as there are on the buffet and as many helpings as they can hold. Specially-designed chafing dishes and copper roast pans have been secured for the buffet table together with modernistic aluminum ware for cold dishes. The buffet table has been set up in the middle of the dining car of the train and is personally supervised by a skilled chef.

In addition to the dishes featured on the buffet table, items from the regular menu will be available for those desiring a full-course dinner.

Santa Fe Starts New Train June 2

A new transcontinental train, the El Tovar, will be placed in operation between Los Angeles, Cal., and Kansas City, Mo., via the Grand Canyon, by the Atchison, Topeka & Santa Fe on June 2. The train, composed of air-conditioned standard and tourist sleeping and chair cars will operate through Clovis, N. M., and Amarillo, Tex. It will leave Los Angeles at 2 p. m., will arrive at Grand Canyon at 8 a. m. the next morning, will leave there at 8 p. m. the same day and will arrive in Kansas City at 7:40 a. m. the fourth day. Westbound the train will leave Kansas City at 11:50 p. m., arriving Los Angeles at 11 a. m., with the same period of time for stopover at Grand Canyon.

Silver Streak Earns $1.98 a Mile on Exhibition Runs

Gross earnings of the Silver Streak of the Chicago, Burlington & Quincy amounted to $1.98 per mile during exhibition runs made during 26 days prior to April 15, 1940, when the train was placed in regular service between Lincoln, Neb., and Kansas City, Mo., via Omaha. On these 26 days it carried 7,752 adults and 1,604 children, a total of 9,356 passengers for a total revenue of $14,261, an average of 360 passengers and $548.50 per day. It traveled 7,216 miles and the average revenue for all of these excursions was $1.98 per mile.

Of the 9,356 passengers carried, 6,518 or 70 per cent made a round trip without getting off the train, and of this latter number 1,517 or 23 per cent were children of half-fare age.

In addition to these excursions, the train was open for public exhibition at 17 different points for a total period of 46 hours 35 minutes and 20,000 visitors passed through it, an average of 430 per hour.

Courtesy New Haven R. R.

Passengers Pay $1.25 to Eat Their Fill From This Buffet Table on the New York, New Haven & Hartford's Merchants' Limited

Southern Governors on That $3,000,000 Statistical Job

The Southern Governors' Freight Rate Conference has filed with the Interstate Commerce Commission an answer to the recent petition of the railroads for a modification of the commission's order of January 9, calling for information with respect to the movement of traffic to be supplied in connection with the 28300 and 28310 investigations of the class rate structure and the consolidated freight classification. As noted in the *Railway Age* of April 27, page 765, the railroads estimated that compliance with the order would cost them "at least $3,000,000."

Among other modifications the railroads had asked the commission to eliminate all l.c.l. and any-quantity shipments from the study, estimating that such a change would save the reporting roads about $2,500,000. Now comes the Southern governors to say that the elimination of l.c.l. and any-quantity shipments would "practically destroy the usefulness of the study;" because data on such shipments "is a prime consideration in fixing class rates." In framing the answer as a whole, however, the governors "have been actuated by a desire that the traffic study be made sufficiently comprehensive to establish all the essential facts, and yet as little burdensome to the respondent railroads as is consistent with this end." The governors fear that they may have been "too liberal in going along with the carriers' suggestions."

City of San Francisco Again A Seventeen-Car Train

Six sleeping cars and the lounge car, Nob Hill, will be added to the Streamliner City of San Francisco of the Chicago & North Western-Union Pacific-Southern Pacific on June 5, thereby restoring it to a 17 car train. Since a derailment near Carlin, Nev., on August 12, the train has consisted of 14 cars.

Attorney General Releases Rail Labor Monograph

The Attorney General's Committee on Administrative Procedure has made public a monograph on "Railway Labor" which covers the administrative procedure of the National Railroad Adjustment Board and the National Mediation Board. The monograph, which covers some 56 pages, is one of a series of studies submitted to the committee by the investigating staff working under the director, Walter Gellhorn.

The foreword to the monograph points

out that the report represents information and recommendations submitted to the committee and that these recommendations are not an expression of committee findings or opinion. It also points out that the committee invites professional and lay criticism and discussion of the matter contained in the study, both by written communications to it addressed to the Department of Justice, Washington, D. C., and by oral presentation at hearings which the committee will hold in June and July in Washington, D. C.

The monograph is divided into two parts, one dealing with each of the two agencies. In turn, the part dealing with the adjustment board is divided into two parts, the character and purposes of the board and the procedures and methods of the board. Under the first heading there are the following chapter heads: Historical background, composition and organization, functions, preliminary negotiation, "adjustment" or adjudication, partisanship, and judicial review and enforcement.

Under the second heading the following chapter headings appear: Assertion of claims, notice, deadlocks on procedural and jurisdictional questions, submissions, hearings, proof, proceedings before referees, delay in Division I's decisions, and stare decisis. The part of the study devoted to the mediation board has five divisions—organization, mediation, arbitration, representation cases, and interpretation of mediation agreements.

Senate Committee Approves Bill to Make Train-Wrecking a Crime

The Senate committee on judiciary has ordered a favorable report on S. 2202, the bill introduced by Senator King, Democrat of Utah, "to make it a crime to wreck a train engaged in interstate commerce."

Federal Barge Lines Consolidates Departments

The transportation department of the Federal Barge Lines will be consolidated with the operating department on May 15 and the position of department superintendent held by Captain C. E. Patton will be abolished. The consolidation is an economy measure.

G. J. Ray Elected Director of Standards Group

G. J. Ray, vice-president (operation), Delaware, Lackawanna & Western, was welcomed as a new member to the board of directors of the American Standards Association, New York, at a meeting on May 8. Mr. Ray was nominated as a director last January by the Association of American Railroads which is affiliated with the Standards Association.

Railroad Devotees Celebrate Centennial of Norwich Road

The New London (Conn.) Railroad Association, a "fan" society, marked the centennial of the Norwich & Worcester (now part of the New York, New Haven & Hartford) by sponsoring a special train from New London to Norwich and Worcester on the line of the original road on May 12. Drawn by a "1400"-class New Haven locomotive gaily decorated for the occasion, the centennial train of modern air-conditioned coaches left New London in the morning for Norwich where passengers dedicated a bronze tablet commemorating the opening of the N. & W. on March 9, 1940. An exhibition of rare railroad and steamboat memoriabilia was placed on display at the adjacent Buckingham Memorial Building and luncheon was served at the railroad station. The special then completed its run to Worcester, stopping at Taft's tunnel, one of the earliest bores in the country.

Springfield Club to Feature Rail Transportation

Railroads will be featured at a transportation dinner to be given by the Mid-day Luncheon Club of Springfield, Ill., on May 24. L. W. Baldwin, chief executive officer of the Missouri Pacific and H. J. Humphrey, vice-president and general manager of the Canadian Pacific, will be the guests of honor and speakers and C. E. Denney, president of the Northern Pacific, will be the chairman of the evening.

Senate Hearings on Pullman Conductors' "Make-Work" Bill

Hearings on the Pullman conductors' "make-work" bill recently introduced by Senator Minton, Democrat of Indiana, got under way on May 15 before a sub-committee of the Senate committee on interstate commerce, headed by Mr. Minton. The bill, S. 3798, would require the Pullman Company to assign a Pullman conductor to every train carrying revenue passengers in a Pullman car between 6 p. m. and 8 a. m.

Union Carbide Research Head Honored by Franklin Institute

Dr. Frederick Mark Becket, president, Union Carbide & Carbon Research Laboratories, Inc., New York, was the recipient of the Elliott Cresson Medal awarded by the Franklin Institute on May 15 at its Medal Day exercises at Philadelphia, Pa. This medal, awarded for distinguished contributions in the realm of physical science, was given to Dr. Becket "in consideration of his outstanding achievements in the development of processes for the production of low-carbon ferro alloys, which have led to the wide use of many of the now well-known alloy steels, particularly low-carbon stainless steels, and the higher chromium oxidation-resistant steels; and also for his many inventions and contributions in the field of electrometallurgy."

K. C. S. Would Free Motor Service from Burdensome Conditions

The Kansas City Southern Transport Company has applied to the Interstate Commerce Commission for a modification of Division 5's decision in the No. MC-61438 proceeding wherein the division first imposed those conditions designed to insure that highway services performed by railroads or their affiliates shall be limited to operations which are auxiliary to or supplemental of railroad service. The petition particularly asks removal of that condition which stipulates that freight carried in the highway services must have a prior or subsequent haul by rail, it has been found to be "extremely onerous."

These conditions were discussed in an editorial entitled "How Trucks and Railroads can Help Each Other and the Public" which appeared in the *Railway Age* of May 4, page 771.

Senate Refuses to Bar C. A. A. Transfer to Commerce Dept.

The Senate on May 14 defeated the resolution introduced by Senator McCarran, Democrat of Nevada, to disapprove President Roosevelt's Reorganization Plan No. IV, which transfers the Civil Aeronautics Authority to the Department of Commerce. The House had previously adopted a similar resolution sponsored by Representative Lea, Democrat of California, but the plan nevertheless goes through; it could be killed only by an adverse vote of both branches of Congress.

Club Meeting

The Traffic Club of Wilmington, Del., will hold "Railroad Night" at the University Club, Wilmington, on May 22. The speaker will be Holcombe Parkes, associate director of public relations, Association of American Railroads, who has selected the subject "Public Relations—Side Show or Science." B. E. Young, railroad section, A. A. R:, will present a voca-film entitled, "The American Way" following Mr. Parkes' address.

U. S. Exports of R. R. Equipment Jump 146 P. C. in First Quarter

Exports from the United States of railway equipment totalled $4,138,073 during the first three months of the year, as compared with $1,685,156 during the corresponding period of 1939, an increase of $2,452,917, or 146 per cent, according to the Bureau of Foreign & Domestic Commerce. Exports of railway equipment, including rolling stock and parts, and all miscellaneous equipment, expanded rapidly in December, 1939, and continued to rise in volume through March, 1940.

Longstreth Medal Awarded to R. L. Templin

The Edward Longstreth Medal for the encouragement of invention was awarded by the Franklin Institute to Richard L. Templin, chief engineer of tests, Aluminum Company of America, New Kensington, Pa., at its Medal Day exercises at Philadelphia, Pa., on May 15. The award was made to Mr. Templin "in consideration of the ingenious application of mechanisms resulting in the development of the Templin automatic autographic deformation recorder."

Federal Barge Line Had 1939 Deficit of $299,949

The government-owned Inland Waterways Corporation reported a net deficit of $299,949.51 for the year 1939 as compared with a 1938 net income of $1,105,449.71, according to the annual report made public on May 16. The report was submitted to Secretary of Commerce Hopkins by I. W. C. President Chester Thompson who pointed out that he had taken charge

of the corporation only about six weeks before the close of last year.

Mr. Thompson, who succeeded Major General T. Q. Ashburn when the latter was ousted shortly after the transfer of I. W. C. from the War Department to Commerce, said that the poor 1939 showing was due to a combination of adverse situations. These included low water, a strike during which an embargo was in effect and increased payments to employees.

Senate Sub-Committee to Consider Pipe-Line Bill

Chairman Wheeler of the Senate committee on interstate commerce has appointed a sub-committee to consider S. 3753, recently introduced by Senator Johnson, Democrat of Colorado, to amend the Interstate Commerce Act to require pipe lines to obtain certificates of convenience and necessity from the Interstate Commerce Commission for new construction and extensions. Members of the sub-committee are Senators Johnson and Schwartz of Wyoming, Democrats, and Reed of Kansas, Republican.

Woodard Awarded Henderson Medal

At its Medal Day exercises at Philadelphia, Pa., on May 15 the George R. Henderson Medal was awarded by the Franklin Institute to William E. Woodard, vice-president in charge of design, Lima Locomotive Works, Inc., New York. This medal is awarded for distinguished contributions in the field of railway engineering, and it was presented to Mr. Woodard "in consideration of his accomplishments in locomotive engineering and his important contributions in the field of steam locomotive design."

Railroads Ready to Move Winter Wheat Crop

The Association of American Railroads, through its Car Service Division, has taken steps to insure the prompt movement of this year's winter wheat crop. While the prospective yield in the important producing states this year will be considerably below last year's production, various factors in the general transportation situation caused the issuance of orders to all railroads throughout the country to expedite the prompt return to their home lines of all box cars of western ownership.

By building up their car supply on their own lines in advance of harvesting, as they have done in former years, and with the cooperation of shippers and receivers of freight through the various Shippers Advisory Boards in the prompt loading and unloading of cars, railroads serving the wheat producing territories are able to meet the peak grain movement without the slightest difficulty.

Based on its condition of May 1, the estimated crop of 459,691,000 bushels of winter wheat this year is 18 per cent below last year and 19 per cent below the average production of the previous ten years. In the major producing territory—the Southwestern Plains area—there is a much greater reduction in crop prospects than elsewhere, the estimate being 36 per cent below last year and 40 per cent below the ten year average. Comparatively favorable prospects prevail, however, throughout the soft winter wheat states of the Ohio Valley and the Pacific Northwest.

"The importance of box car supply in relation to the annual movement of winter wheat harvested in June and July is well recognized by all railroad transportation officers," the Car Service Division in its orders said today. "This year the situation is of peculiar interest due to unpredictable trends in the handling of all grains, due to government controls, and the complication of the European War; thus the car supply may well be affected by a sharp rising tide of industrial traffic and the possibilities of a concurrent increased movement of government corn and wheat now in storage in very large volume.

"As of May 1, there were 465,500,000 bushels of corn held by farmers under government loans, and an additional 90,000,000 bushels held by the Commodity Credit Corporation. Advice is now published that the export subsidy program will be applied to corn and 25,000,000 bushels have been disposed of to Great Britain. This may presage an active export movement of this commodity. The Commodity Credit Corporation shows 78,000,000 bushels of wheat in storage under loan as of April 27.

"The annual seasonal increase in rail traffic is developing. While the increase now shown over last year is affected by the reduction a year ago in coal production, there are signs of increasing activity in the demands for box cars. Possibilities in this direction for traffic other than grain must be kept in mind.

"The wheat movement in the Southwest will become active in about thirty days. Western roads, regardless of the size of the crop, will have their usual rush movement to market the first two or three weeks. Many of the Southwestern markets, particularly in Texas, are carrying an abnormal supply of old grain. With general uncertainty as to old crop movement, and with a new crop at hand which may prove greater than now anticipated, it behooves western granger lines to build up their system car supply."

All Freight to Pacific Coast

The Interstate Commerce Commission in a report by Commissioner Aitchison has found not unlawful suspended schedules proposing all-commodity rates, representing reductions, on freight in general, from Western points to Pacific Coast terminals and interior points, including Salt Lake City, Utah. The decision is in I. & S. No. 4648, All Freight to Pacific Coast, and it orders the continuance of the investigation while permitting the suspended tariffs to become effective.

So that the respondents may be advised of the scope of the investigation, the commission sets forth matters which will be inquired into as follows:

"The nature of the articles which will be shipped under these rates; their average ratings under the governing classification, considered separately as less-than-carload and carload traffic; and the average weight density per cubic foot. Respondents should develop whether it is practicable to load these articles to the proposed minimum in cars less than 40 feet in length, and to establish graduated minima based on the cubical capacity of the cars. Further consideration should be given to the establishment of like rates eastbound as well as westbound, including rates from and to the more important intermediate shipping points, such as Phoenix, Ariz., Spokane, Wash., Boise, Idaho, and Reno, Nev. The inquiry should develop whether there should be a graduation of rates to give some effect to the shorter distances from such points as Minneapolis and St. Paul, Minn., Mississippi and Missouri River cities. The parties should produce what can be shown as to the cost of service in connection with less-carload traffic which is not incurred on all-freight. Finally, the showing that many less-carload commodity rates must be maintained, supplemented by broad mixtures, indicates that as ancillary to the direct issue in this proceeding the respondents should reexamine their less-carload class rates, and be prepared to show the results of an investigation of the possibility of a more extensive use of class rates if revised."

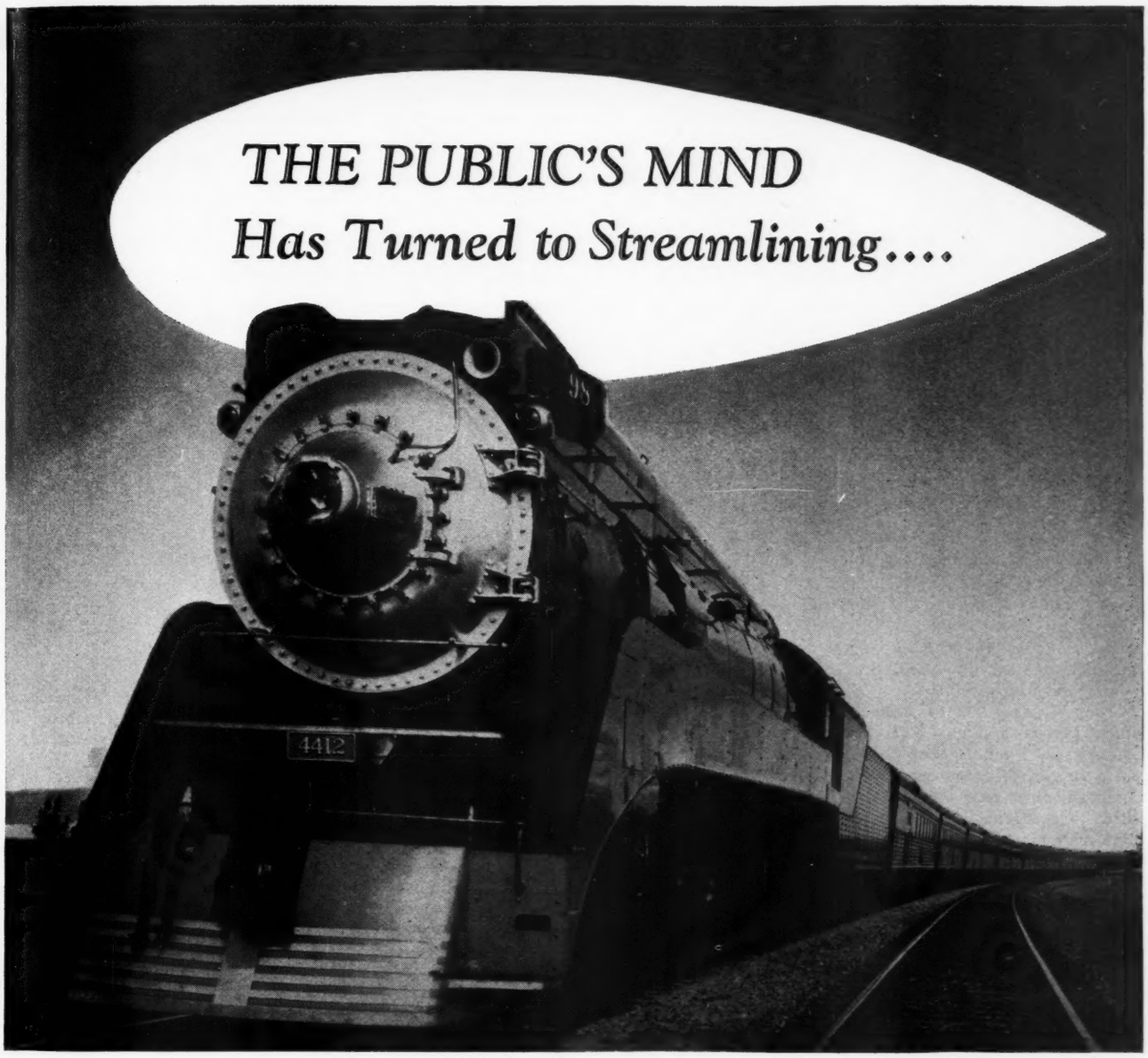
Commissioners Rogers and Alldredge dissented, while Commissioner Miller did not participate.

Chicago Car Foremen Hear L. K. Sillcox

About 250 members and guests of the Car Foremen's Association of Chicago, assembled for the final meeting of the current season on Monday evening, May 13, at the Hotel LaSalle, Chicago, the principal address, "Braking Trains Under Modern Conditions" being presented by L. K. Sillcox, first vice-president, New York Air Brake Company, Watertown, N. Y. Mr. Sillcox departed from his prepared address and talked extemporaneously in explaining a series of lantern slides which depicted in spectacular fashion some of the more important problems and accomplishments in the field of modern high-speed braking. He described the development and primary functions of the "AB" brake, as well as brake equipment developed especially for lightweight, high-speed passenger trains. He referred to the exacting requirements of modern wheel service and stressed the possibilities of disc-type brakes in removing the braking load from car wheels. The importance of large diameter wheels, anti-wheel-sliding devices and improved sanding equipment for individual wheels was also stressed.

With reference to the introduction of various new types of air brake equipment and improved features of design to meet modern requirements, Mr. Sillcox said: "No one knows better than the manufacturer the extent to which the success of his designs, and, many times, even his reputation are in the hands of the men who must keep his product in service, once he has done his best work upon it before it leaves his inspection table. You are our employers and without your sympathetic co-operation, our lot would be hard. It is a privilege to acknowledge a debt of this sort. The men who direct and perform the operations which make the equipment of railways imposingly safe and re-

Continued on next left-hand page



. . . capitalize on it!

Today the public is becoming increasingly conscious of streamlined motive power. Streamliners like the Southern Pacific "Daylight" are securing a substantial portion of their revenue from former highway travelers.

Increase your revenue by giving the public the type of motive power that appeals to its fancy . . . . . power with Lima streamlined locomotives.

LIMA LIMA LOCOMOTIVE WORKS INCORPORATED **LOCOMOTIVE WORKS, INCORPORATED, LIMA, OHIO**

liable are contributing in no small measure to the improvement of service and to the ability of their administrations, beleaguered by as trying a set of conditions outside their control as can well be conceived, to sustain and improve the prestige of the industry. In return for your faithful service to our products in the field, we, as brake manufacturers, are ever eager to assist in improving your understanding of the parts which we place in your hands and to explain the reasons for their taking the forms in which you find them."

Safety Contest Winners

Winners among 180 Class I standard railroads in the thirteenth annual Railroad Employees National Safety Contest conducted by the National Safety Council were announced on May 15. Winners for 1939 with their casualty rates includes: Group A, 50,000,000 or more man-hours, Chicago & North Western, 3.53. The Union Pacific's rate of 2.57 was lower than the North Western's, but contest rules prevent a railroad from winning a group award in two consecutive years and the Union Pacific won the 1938 contest.

Group B, 20,000,000 to 50,000,000 man-hours, Atlantic Coast Line, 3.02, first. Michigan Central, 3.69, second. Norfolk & Western, 3.85, third.

Group C, 8,000,000 to 20,000,000 man-hours, Mobile & Ohio, 3.83, first. The Chicago, St. Paul, Minneapolis & Omaha had a rate of 3.58, but was ineligible for a second consecutive first under contest rules. The Elgin, Joliet & Eastern was third with a rate of 4.07.

Group D, 3,000,000 to 8,000,000 man-hours: Maine Central, 3.97, first. The Duluth, Missabe & Iron Range, with a rate of 2.59, was ineligible under contest rules for a second consecutive first place. Pennsylvania, Reading Seashore Lines, 4.29, third.

Group E, 1,000,000 to 3,000,000 man-hours: Charleston & Western Carolina, 0.54, first. Detroit & Toledo Shore Lines, 2.88, second. New York, Susquehanna & Western, 2.94, third.

Group F less than 1,000,000 man-hours: Mississippi Central, 2.57, first. Burlington-Rock Island, 3.64, second. Louisiana, Arkansas & Texas, 4.19, third.

Among 35 switching and terminal railroads, the Union of Pittsburgh won first place in the classification where employees worked 1,500,000 man-hours or more. The Union's casualty rate was 2.31 per 1,000,000 man-hours. The Chicago River & Indiana was second with a rate of 3.11. The Chicago & Western Indiana was third with a rate of 3.30.

The Conemaugh & Black Lick was first among switching and terminal railroads whose employees worked less than 1,500,000 man-hours during the contest year. Its rate was 1.26. Second place went to the Birmingham Southern for its rate of 1.40. The Newburgh & South Shore was third with a rate of 3.74.

In a third division of the contest, for employees of the Pullman Company, the Philadelphia (Northern) zone placed first among the company's seven operating zones with a casualty rate of 0.80, based on 7,469,728 man-hours. The San Francisco zone was second with a rate of 1.35, and the Houston zone third with a rate of 1.42.

Competition among employees of the six Pullman Company shops was won by the Wilmington, Del., shop with a perfect record—no accident deaths or injuries. The Richmond, Cal., shop was second with a rate of 1.92, while a rate of 3.95 took third place for the Buffalo shop.

Officers of the winning railroads will receive plaques symbolic of their achievements from the National Safety Council at an award dinner in the Council's headquarters in Chicago on May 20.

Would Set Up a Beaver-Mahoning Authority

Representative Kirwan, Democrat of Ohio, has introduced in the House H. R. 9721, a bill to provide for the creation of a federal waterway authority to construct and operate a navigable canal following the general route of the so-called Beaver-Mahoning project. This plan, which follows the route of the Beaver-Mahoning project on which the Interstate Commerce Commission, at President Roosevelt's request, rendered an unfavorable report, details of which were given in the *Railway Age* for February 3, page 245, calls for the construction and operation of a canal from Beaver, Pa., on the Ohio River to a point 21 miles up the Beaver River in the vicinity of New Castle, Pa., thence up the Mahoning River about 12 miles to Struthers, Ohio.

The authority would be authorized to issue and sell its own obligations in an amount sufficient to defray the cost of constructing the project and to acquire property by condemnation or purchase. Authority is given in the bill to issue and sell either publicly or privately a maximum of $50,000,000 of 100-year first mortgage secured 3¼ per cent bonds, which would not be guaranteed either as to interest of principal by the federal government.

The Authority would also be given the power to fix tariffs and tolls based on the anticipated traffic, and the bill goes on to say that the tolls shall be sufficiently high to provide for interest charges, amortization of the debt to maturity, depreciation, administration charges, and any other ordinary and usual charges of operating the project. It is also provided that at the debt maturity the project shall become toll free and the Authority shall be dissolved. There is also a provision that the obligations and jurisdiction of the Authority may be assumed at any time by the United States by act of Congress, and in the event of war the jurisdiction of the Authority may be superseded by the War Department or such other executive agency or department as the President of the United States shall designate.

The Authority would be administered by a board of three directors to be appointed by the President, one director to be a representative of the general public, one to represent the industries of the valleys which the canal will traverse, and the remaining director to be chosen from the staff of the Chief of Engineers of the War Department, under whose supervision the project would be constructed.

Equipment and Supplies

LOCOMOTIVES

THE WESTERN MARYLAND is inquiring for 12 single expansion articulated locomotives of the 4-6-6-4 type.

THE DETROIT, TOLEDO & IRONTON is inquiring for four or seven locomotives of the 2-8-2 or 2-8-4 type.

THE LOURENCO MARQUES SYSTEM, Mocambique, East Africa, is inquiring for four locomotives of the 2-6-2 type. The offices of the company are located at Lourenco Marques, P. O. Box 276.

THE UNITED STATES NAVY DEPARTMENT, Bureau of Supplies and Accounts, Washington, D. C., will receive bids on May 28th for 11 Diesel-electric locomotives for service at the Puget Sound, Washington, navy yard.

THE CHICAGO, ROCK ISLAND & PACIFIC, reported in the *Railway Age* of April 27, as having been authorized by the federal district court to purchase one 1000-hp. Diesel electric switching locomotive from the American Locomotive Company, has accepted delivery of this equipment.

FREIGHT CARS

UNITED STATES WAR DEPARTMENT, chief of engineers, Washington, D. C., will receive bids on June 6th for 50 tank cars of 10,000 gallons capacity for carrying gasoline.

THE GREAT NORTHERN has ordered 1,000 double-sheathed box cars of 50 tons' capacity from the Pullman-Standard Car Manufacturing Co. Bids are wanted on May 27th for 1,000 box cars of 50 tons' capacity.

THE ALASKA RAILROAD has received low bids on 20 hopper cars of 55 tons' capacity from the Pullman-Standard Car Mfg. Co., and for four refrigerator cars from the American Car & Foundry Co. Inquiry for this equipment was reported in the *Railway Age* of March 30th, page 609.

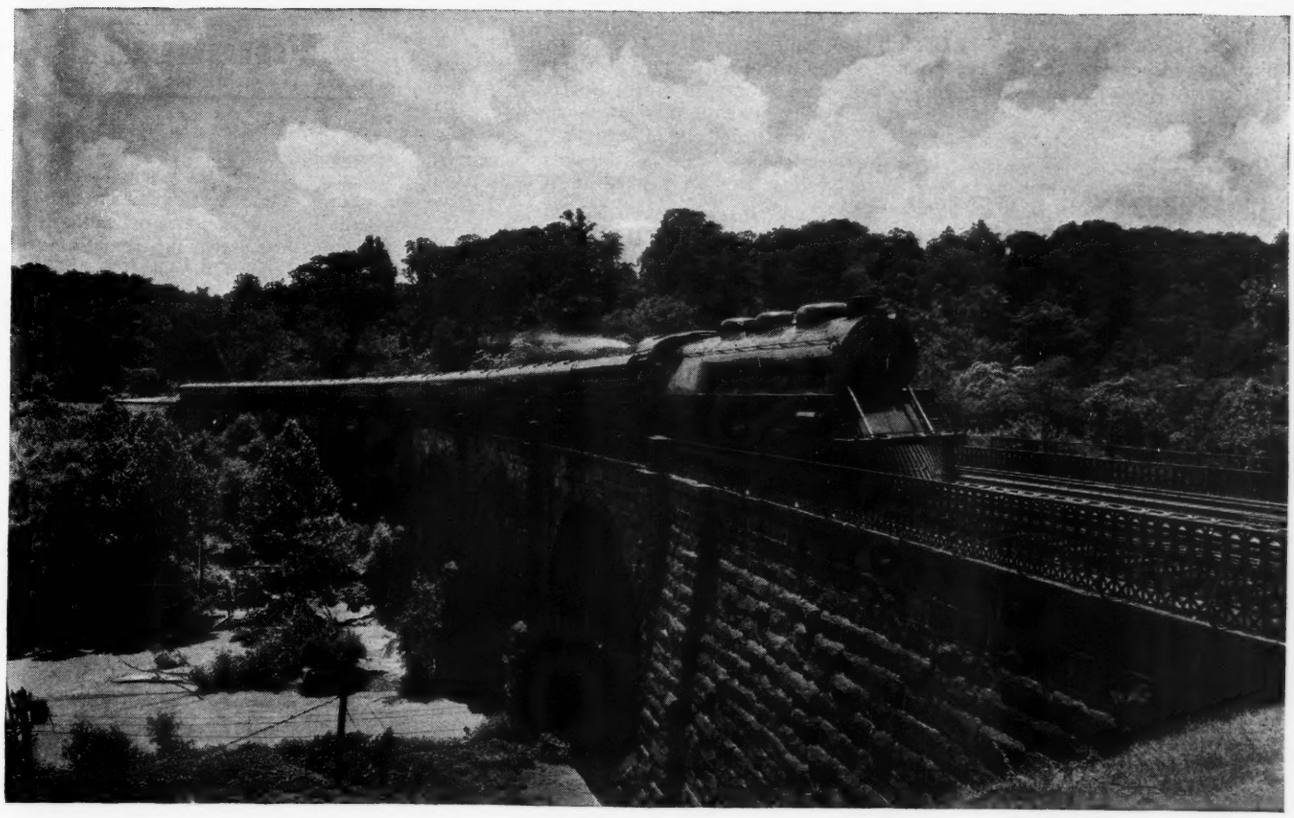
THE CHICAGO, ROCK ISLAND & PACIFIC, reported in the *Railway Age* of April 27, as having been authorized by the federal district court to purchase 150 hopper-bottom gondola cars from the Pullman-Standard Car Manufacturing Company, has accepted delivery of this equipment. Arrangements for the lease and purchase of 60 hopper cars from the General American Transportation Corporation, reported in the *Railway Age* of April 27, have been completed.

PASSENGER CARS

THE WESTERN RAILWAY OF ALABAMA is inquiring for two baggage-express cars.

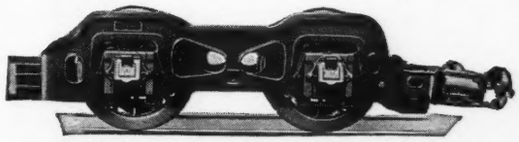
THE ALASKA RAILROAD has received low bids for two baggage cars and two coaches

Continued on next left-hand page



WHEEL LOAD LIMITS
need not cramp your operations

Limited axle loads can still produce an efficient modern locomotive if idle trailing wheels are put to work for starting and acceleration. » » » Incorporate The Locomotive Booster* in the fundamental design and thereby raise the starting power and improve acceleration without impairing the factor of safety on existing tracks.



* Trademark Registered United States Patent Office

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK CHICAGO MONTREAL

from the American Car & Foundry Co. Inquiry for this equipment was reported in the *Railway Age* of March 30th, page 609.

Supply Trade

William Taggart, representative of the Steel & Tube division of the **Timken Roller Bearing Company,** Canton, Ohio, has been appointed manager of tube sales.

W. A. Blume, vice-president of the American Brakeblok division of the **American Brake Shoe & Foundry Company,** has been elected president of the **American Brakeblok Division** with headquarters at Detroit, Mich.

S. W. Gibb, assistant sales manager of the materials handling division of the **Yale & Towne Manufacturing Co.,** at Philadelphia, Pa., has been appointed general sales manager of the Philadelphia division.

Howard R. Murphy, manager of the tractor business of **Sears Roebuck & Company,** and formerly manager of the sales development division of the **Caterpillar Tractor Company,** Peoria, Ill., has been appointed sales manager of the central division of the latter company to succeed **C. M. Burdette,** resigned.

Wilfred A. Clabault has been appointed advertising manager and will also be engaged in sales activities for the **Roller-Smith Company,** with headquarters at Bethlehem, Pa. Announcement is made that the company's switchboard division has been transferred to Allentown, Pa., while the air and oil circuit breaker and instrument divisions are to remain at Bethlehem.

More than 3,000 customers and friends of **Joseph T. Ryerson & Son, Inc.,** Chicago, were guests of that company on May 11 when it opened the new addition to its plant at Chicago. During the "open house," 150 guides explained the technical exhibits and processes. Special demonstrations in the laboratory included various tensile, hardness, and bending tests. Metallurgists also showed how Allegheny stainless steel is polished. Work qualities of Allegheny stainless steel were illustrated. The route of a typical steel order was traced from the order department to the loading floor. Warehouse activities and the latest methods of straightening, rolling, corrugating, shearing, burning, punching, bending, etc., were illustrated.

OBITUARY

Thomas A. McGinley, president and chairman of the board of the Duff-Norton Manufacturing Company, who died on April 13, as reported in the *Railway Age* of May 4, was graduated from Yale University in 1901. Soon afterward, he entered the employ of the Duff Manufacturing Company, and worked through its various departments up to the presidency and board chairmanship of its successor organization, The Duff-Norton Manufacturing Company. During his early manhood he, with his father, was interested in several of George Westinghouse's enterprises; and at his death Mr. McGinley was a director of the Westinghouse Air Brake Company and the Union Switch and Signal Company, as well as numerous other concerns, including the Pittsburgh Screw and Bolt Company, the Fidelity Trust Company and the Allegheny General Hospital. He was treasurer of the Eaglis Company. During the World War, Mr. McGinley served in New York as district manager in charge of aircraft production for the United States Army.

Blank & Stoller

Thomas A. McGinley

More Than 3,000 Customers and Friends of the Ryerson Company Were Served a Buffet Luncheon in the New Addition to Their Chicago Plant During "Open House" May 11, 1940

Financial

ATLANTIC COAST LINE.—*Dismissal of Abandonment Application.*—Acting at this company's request, Division 4 of the Interstate Commerce Commission has dismissed its application for authority to abandon a line extending from Bloomfield, Fla., to the end of the Okahumpka-Yalaha branch, in Lake County, Fla.

CHICAGO & EASTERN ILLINOIS.—*Reorganization.*—Reorganization will be completed within 90 days after the first mortgage of the new company has been determined, according to a report of the reorganization committee to the federal district court on May 13. The report was in response to an order issued by the court on May 10, seeking the reasons for delay. Work on the new first mortgage is expected to be completed by May 20, after which the committee will draft the proposed new income mortgage.

COLORADO & SOUTHERN.—*Extension of Bond Maturities.*—The Wichita Valley, the Abilene & Northern, and the Wichita Falls & Oklahoma, all subsidiaries of this company, respectively, have asked the Interstate Commerce Commission for authority to extend from July 1, 1936, to July 1, 1951, the obligation and lien of their matured first mortgage six per cent bonds in the following amounts: $744,000, $516,000, and $353,500. The bonds are all owned by the C. & S.

GULF, MOBILE & NORTHERN.—*R. F. C. Loan.*—Division 4 of the Interstate Commerce Commission has approved a loan to this company from the Reconstruction Finance Corporation in the amount of $7,500,000, the proceeds to be used as part payment for $7,839,000 face value of Mobile & Ohio general mortgage bonds which will be purchased from the Southern as of May 1, for $7,538,166. Details of the loan, which forms a part of the merger of the M. & O. and the G. M. & N. into a new company known as the Gulf, Mobile & Ohio, were given in the *Railway Age* of May 4, page 799.

ILLINOIS TERMINAL.—*Purchase.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to purchase (1) the entire railroad properties and assets of the St. Louis & Alton, including its main line extending northerly from Madison, Ill., to Wood River, 14.6 miles; and (2) a line known as the O'Fallon Freight Line, owned by the St. Louis & Belleville Electric, extending westerly from O'Fallon, Ill., to its terminus, 3.6 miles.

MINNEAPOLIS & ST. LOUIS.—*Reconsideration of Reorganization Plan.*—Jesse Jones, federal loan administrator, revealed at his May 9 press conference that this company would soon ask the Interstate Commerce Commission to reconsider its adverse decision on the plan to divide this company into two parts in the furtherance of the road's reorganization. As had been previously announced after the commission's decision, the reorganization managers of

Continued on next left-hand page

NO. 119 OF A SERIES OF FAMOUS ARCHES OF THE WORLD

MILCOV BRIDGE

ROUMANIA

This bridge is located on the Buzau-Marasesti trunk route of the Roumanian State Railways, which have their headquarters in Bucharest. It consists of three ferro-concrete arches, each of approximately 100 ft. span. The height in the center at rail level is 52 ft. This is one of the newer bridges built in connection with the Roumanian State Railways improvement program.

The Security Sectional Arch for the locomotive firebox was designed and developed to further the economy and effectiveness of the steam locomotive. But you will only realize the true economy of the arch when it is maintained *complete*. Check the arch before the locomotive leaves the roundhouse . . . every missing arch brick is a leak in combustion efficiency.

There's More to SECURITY ARCHES *Than Just Brick*

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists

AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.
Locomotive Combustion Specialists

the road decided to ask the Reconstruction Finance Corporation for a $4,000,000 loan on the entire system instead of a loan on only one part of the system. Mr. Jones said that the R. F. C. had decided against making the loan on the entire system.

NEW YORK CENTRAL.—*Abandonment.*—This company would not be permitted to abandon the part of its Lansing branch extending from Lansing, Mich., in a general southerly direction to Springport, 23.6 miles, if Division 4 of the Interstate Commerce Commission adopts a proposed report of its Examiner Ralph R. Molster. The examiner found that the company desired to abandon the branch because of a need for savings in the operation of the system, but he gones on to say that "no substantial injury or injustice to the applicant should ensue if the directly-affected public is given a reasonable further opportunity to show what can be done by cooperation in the effort to preserve the line." He further recommended that the application be denied without prejudice to its renewal after the expiration of a year.

NEW YORK, NEW HAVEN & HARTFORD.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon a branch line extending from Hobarts, Conn., northwesterly to Brookfield Junction, 2.2 miles.

NEW YORK, SUSQUEHANNA & WESTERN.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon a line extending from Hainesburg Junction Tower, N. J., to Stroudsburg, Pa., 11.8 miles.

OHIO PUBLIC SERVICE.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon that portion of its line extending from Violet, Ohio, easterly to the end of the line at Marblehead, 4.3 miles.

PORT ISABEL & RIO GRANDE VALLEY.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon a line extending from Brownsville, Tex., to Port Isabel, 26 miles, together with 3.7 miles of spur tracks.

WESTERN PACIFIC.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon that portion of its so-called Gulling branch extending from Gulling Junction, Calif., to the end of the branch at Gulling, 1.4 miles.

Average Prices of Stocks and Bonds

	May 14	Last week	Last year
Average price of 20 representative railway stocks..	27.58	31.88	26.99
Average price of 20 representative railway bonds..	56.39	59.28	57.49

Dividends Declared

Philadelphia, Germantown & Norristown.—$1.50, quarterly, payable June 3 to holders of record May 20.

Pittsburgh, Youngstown & Ashtabula.—Preferred, $1.75, quarterly, payable June 1 to holders of record May 20.

West Jersey & Seashore.—Special Guaranteed, $1.50, semi-annually, payable June 1 to holders of record May 15.

Railway Officers

EXECUTIVE

W. P. Watkins has been appointed assistant vice-president (accounting) of the Missouri & Arkansas, a newly created position, with headquarters at Harrison, Ark.

Howard Brooks, assistant treasurer of the Chicago, Rock Island & Pacific, with headquarters at Ft. Worth, Tex., has been appointed executive general agent, a newly created position, with the same headquarters.

Howard L. Ingersoll, assistant to president of the New York Central, with headquarters at New York, has retired. Mr. Ingersoll entered railway service on January 1, 1896, with the Lake Shore & Michigan Southern (now New York Central). In April, 1912, he was appointed assistant general manager of the New York Central & Hudson River (now N. Y. C.), in which capacity he remained until April, 1913, when he was appointed assistant to senior vice-president of the New York Central Lines. In January, 1914, he became assistant to the president, with headquarters at New York. During the World War he served as mechanical assistant to the regional director of the Eastern region, and as a member of the National Committee on Standards for Locomotives and Cars, Division of Operation, for the United States Railroad Administration. Mr. Ingersoll was re-appointed assistant to president of the New York Central in February, 1920.

FINANCIAL, LEGAL AND ACCOUNTING

E. H. Janke has been appointed auditor of the Peoria & Eastern, with headquarters at Indianapolis, Ind., succeeding **H. H. Ramsey,** whose death on March 13, was announced in the *Railway Age* of March 23.

W. M. Bernethy, assistant secretary and assistant treasurer, and **Edward H. Utley, Jr.,** comptroller of the Chicago, South Shore & South Bend, with headquarters at Michigan City, Ind., have been elected respectively treasurer and comptroller-secretary, with the same headquarters, succeeding to the duties of **Bernard P. Shearon,** secretary-treasurer.

OPERATING

W. R. Adair has been appointed acting assistant superintendent on the Southern Pacific at El Paso, Tex., succeeding **L. C. Gram,** who has been granted a leave of absence because of illness.

TRAFFIC

A. T. Stovall, Jr., assistant traffic manager on the Southern, with headquarters at St. Louis, Mo., has been appointed executive general agent, a newly created position, with the same headquarters. The position of assistant traffic manager at St. Louis, has been abolished.

L. E. Wagner has been appointed general agent on the Great Northern at Kalispell, Mont., a newly created position.

G. A. Hager has been appointed general agent for the Duluth, South Shore & Atlantic at Bay City, Mich., a newly created position.

Karl A. E. Berg has been appointed chief geologist of the North Pacific, with headquarters at Billings, Mont., succeeding **E. H. MacDonald.**

Claude Wanner Getty, assistant general passenger agent of the Pennsylvania, has been appointed general passenger agent with headquarters as before at Philadelphia, Pa. **E. R. Comer,** assistant general passenger agent at Philadelphia has been transferred to New York, succeeding **Charles C. Trueb,** deceased. **Homes Bannard,** assistant general passenger agent of the Long Island, succeeds Mr. Comer as assistant general passenger agent of the Pennsylvania, with headquarters at Philadelphia. **J. V. Sowers,** division passenger

Claude Wanner Getty

agent at New York, has been appointed assistant general passenger agent of the Long Island, succeeding Mr. Bannard. **I. F. Entriksen,** division passenger agent at Pittsburgh, has been appointed assistant general passenger agent with headquarters at New York. **R. B. Stoll,** district passenger agent on the staff of the passenger traffic manager at Philadelphia, has been transferred to Newark, N. J., succeeding **I. W. MacMullin,** who has been appointed division passenger agent at New York. **I. W. Adelhelm,** division passenger agent at Indianapolis, Ind., has been transferred to Cincinnati, Ohio, while **A. C. Sigelen,** division passenger agent at Cleveland, Ohio, has been transferred to Harrisburg, Pa., and **R. M. Harvey,** division passenger agent at St. Louis, Mo., has been transferred to Indianapolis. **C. R. James,** district passenger agent at Dallas, Tex., has been appointed division passenger agent at St. Louis and **H. A. Weiss,** district passenger agent at Pittsburgh, has been appointed division pas-

Continued on next left-hand page

A few Cents...

SAVED IN THE BACK-SHOP

CAN COST DOLLARS ON THE ROAD!

THE few cents saved in the back-shop by making your own repairs to your superheater units are more than off-set if the unit fails on the road. On a mileage basis Elesco REmanufacturing service more than pays for itself. Each return bend is machine-die-forged, making a homogeneous, dependable structure. The same trained men and special machines are used to REmanufacture the old units as are used to manufacture new units.

ELESCO

SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

THE SUPERHEATER COMPANY

Representative of
AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Ave. CHICAGO
• • •
Montreal, Canada
THE SUPERHEATER COMPANY, LTD.

senger agent at Cleveland. Mr. Getty was born on January 12, 1890, at Engleville, Pa. He attended the public and high schools of that city and secured a business college education, which he later supplemented by a course at the University of Pennsylvania Evening School. He entered the service of the Pennsylvania on June 20, 1907, and served in various clerical capacities in the motive power and transportation departments at Philadelphia until August 1, 1912, when he was transferred to the passenger department. He was appointed chief clerk to the passenger traffic manager, with headquarters at Philadelphia, on November 1, 1917, and held that position until the adoption of the Regional organization in March, 1920, at which time he was appointed special representative in the passenger department in the Northwestern region, with headquarters at Chicago. Mr. Getty was appointed assistant general passenger agent with headquarters at Chicago on August 1, 1921. He was transferred to Philadelphia on June 1, 1932, in which position he remained until his recent appointment.

J. V. Cooley, passenger representative with the New York Central, has been appointed general agent, passenger department, with headquarters as before at Houston, Tex. The position of passenger representative has been abolished.

N. D. Browne, general agent, freight department, for the Chicago & North Western at Los Angeles, Cal., has been appointed general agent at that point, succeeding to the duties of **E. H. Lamb,** general agent, passenger department, who has retired because of ill health.

ENGINEERING AND SIGNALING

E. W. Anderson, acting signal and telephone engineer of the Nashville, Chattanooga & St. Louis, has been promoted to signal and telephone engineer, with headquarters as before at Nashville, Tenn.

H. M. Booth, roadmaster on the St. Louis-San Francisco at Amory, Miss., has been promoted to engineer-roadmaster, with headquarters at Ft. Worth, Tex., succeeding **T. E. Bliss,** division engineer, who has been transferred to Chaffee, Mo., replacing **H. F. Busch.** Mr. Busch has been transferred to Memphis, Tenn., relieving **G. W. Koontz.**

A. O. Wolff, acting district engineer of the Canadian Pacific, with headquarters at Saint John, N. B., has been appointed district engineer, succeeding **C. C. Kirby,** who retired on March 31. Mr. Kirby was born on March 8, 1880, at Newport, Monmouth, England, and came to Canada in 1907. He entered railway service in June, 1907, as instrumentman on the Grand Trunk (now Canadian National). He was out of railway service from June, 1908, until April, 1909, on the latter date he became transitman on the Canadian Pacific. Mr. Kirby was appointed resident engineer, with headquarters at Montreal, Que., in May, 1910, and in February, 1912, became resident engineer, Montreal Terminals. He was appointed assistant engineer at Montreal, in January, 1913, and held this position until January 1, 1916, when he was promoted to division engineer, with headquarters at St. John, later becoming district engineer at that point.

John B. Hunley, whose promotion to engineer of structures of the New York Central System, with headquarters at Chicago, and with jurisdiction over the Erie, Cleveland, Toledo, Western, Ohio Central, Canada, Detroit, Michigan and West divisions, in addition to his jurisdiction over the Cleveland, Cincinnati, Chicago & St. Louis (Big Four), was announced in the *Railway Age* of May 11, was born at Terre Haute, Ind., on August 12, 1881, and was graduated from the Rose Polytechnic Institute in 1903. In May, 1903, he entered railway service as an assistant engineer in the construction department of the Big Four and in 1905, he was promoted to assistant engineer in the chief engineer's office, later being advanced to office engineer. In 1915, he was promoted to engineer of bridges and structures of the

John B. Hunley

Big Four, with headquarters at Cincinnati, Ohio, the position he held until his recent promotion. For many years Mr. Hunley has peen active in the work of the American Railway Engineering Association, serving as director of that organization from 1937 to 1940 and as chairman of the special committee on Impact since March, 1937. Outstanding of his work with the A. R. E. A., was the monograph on Impact on Steel Bridges, published by that organization in October, 1935.

MECHANICAL

C. R. Anderson has been appointed engineer in the perishable division of the Association of American Railroads, with headquarters at New York.

OBITUARY

Charles L. Netherland, general agent for the Illinois Central at Milwaukee, Wis., died in that city of peritonitis on May 6.

Herbert J. Austin, who retired in 1928 as cashier of the Atchison, Topeka & Santa Fe, died of a heart attack on May 12, at San Diego, Cal. He was 77 years old.

William Dewey Grubb, general agent for the Kansas City Southern and the Louisiana & Arkansas at Chicago, died in Oklahoma City, Okla., on May 9, after an illness of several weeks.

George Duryea Carnes, freight agent of the Long Island, with headquarters at East New York, died on May 13, at the Huntington Hospital, Huntington, L. I., after a short illness. He was 57 years old.

Winthrop Waite, president of the Northern of New Jersey, died on May 13, of burns received in an accident which occurred at his home on April 13. He was 61 years old, and has been president of the Northern of New Jersey since January 16, 1939.

Frank A. Curry, who retired on January 1, 1938, as assistant freight traffic manager of the New York, Chicago & St. Louis (Nickel Plate), with headquarters at Chicago, died on May 9, at the Methodist hospital in Indianapolis, Ind., following an operation. Mr. Curry entered railway service as a telegraph operator on the Boston & Maine. Later he served consecutively as station agent and then freight agent for the New York Central at Yonkers, N. Y., and freight agent on the same railroad at Sixtieth street, New York. Mr. Curry entered the service of the Lake Erie & Western (now part of the Nickel Plate), in 1911, as division freight agent at Indianapolis, Ind., where he remained until 1916 when he was promoted to assistant general freight agent, with headquarters at the same point. On June 1, 1928, he was advanced to assistant freight traffic manager of the Nickel Plate, with headquarters at Chicago, the position he held until his retirement.

John B. Hamilton, whose resignation as superintendent on the Illinois Central, with headquarters at Carbondale, Ill., was announced in the *Railway Age* of February 10, died in a hospital in Carbondale on May 13. Mr. Hamilton was born at Du Quoin, Ill., on May 8, 1888, and entered railway service on April 7, 1907, as a clerk at Du Quoin. Three years later he was advanced to cashier at Hawthorne, Ill. In July, 1912, he became agent at Harvey, Ill., and later in the same year he was promoted to chief clerk of the loss and claim bureau at Chicago. Mr. Hamilton served during part of 1917 and 1918 as agent at Fordham (Chicago), where he remained until November of the latter year when he became terminal freight agent at Chicago. In April, 1920, he was appointed acting trainmaster at Fordham, then being promoted to supervising agent on the St. Louis division in May, 1920, and to trainmaster on the Chicago terminal at Fordham in September, 1920. He was transferred to the Central Station, Chicago, in November, 1925, where he remained until November, 1928, when he was promoted to superintendent of freight service with headquarters at Markham Yard, Chicago. Mr. Hamilton was promoted to superintendent of the Wisconsin division, with headquarters at Freeport, Ill., on June 16, 1930, and he was later transferred to Carbondale, Ill.